

JUNE, 1907.

Vol. LI. No. 352.

JOURNAL

— OF THE —

Royal United Service Institution.



PUBLISHED UNDER THE AUTHORITY OF THE COUNCIL.

Editor - Captain H. GARBETT, R.N. (Retired),
To whom all communications should be addressed.

LONDON :

**The Royal United Service Institution,
WHITEHALL, S.W.**

Telegraphic Address : "RUSSATUS, LONDON."

Printed by J. J. KELIHER & CO., LIMITED, 32, New Bridge Street, E.C.,
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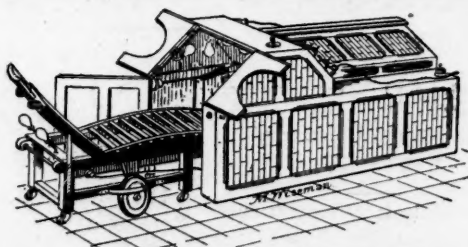
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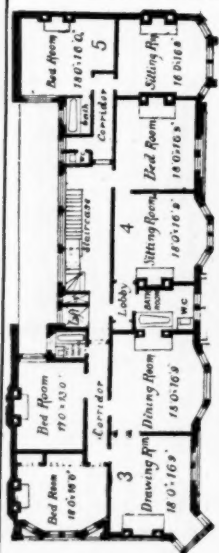
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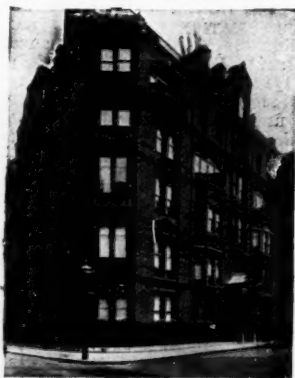
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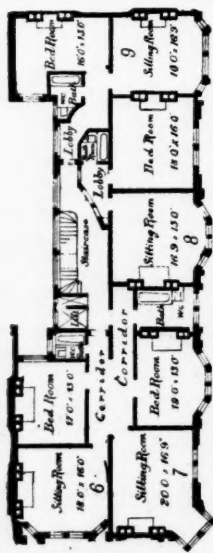
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The following Officers, whose names are arranged in regimental order, were successful from us at the recent Competitive Examination for admission to the Staff College:—

Capt. C. Evans, R.F.A.	Capt. H. S. Williams, Dorsetshire Regt.
Capt. G. C. Merrick, D.S.O., R.G.A.	Capt. B. D. L. G. Anley, D.S.O., Essex Regt.
Capt. W. H. Moore, D.S.O., R.G.A.	Capt. R. S. Hamilton Grace, Durham L.I.
Capt. J. P. Mackesy, R.E.	*Capt. H. F. Baillie, Seaforth Highlanders.
Capt. B. W. B. Bowdler, R.E.	Capt. P. S. Allen, Gordon Highlanders.
Capt. F. D. Farquhar, D.S.O., Coldstream Gds.	Capt. J. K. Cochrane, Leinster Regt.
*Capt. R. G. Parker, Royal Lancaster Regt.	Capt. R. L. Ricketts, Indian Army.
Capt. G. N. T. Smyth-Osbourne, Devonshire R.	Capt. W. K. Bourne, Indian Army.
Capt. V. H. M. de la Fontaine, East Surrey R.	Capt. F. W. Lumsden, Royal Marine Artillery.
Capt. and Brev. Major F. R. Hicks, Hamps. R.	

And the following received nominations:—

Captain H. C. Bickford, 6th Dragoon Gds.	Captain H. Wake, D.S.O., K.R.R. Corps.
Captain C. J. C. Grant, Coldstream Gds.	Captain and Brev. Major N. J. G. Cameron,
Captain W. D. Wright, V.C., R.W. Surrey R.	Cameron Highlanders.
Captain C. H. Harington, D.S.O., Liverpool R.	Captain G. P. Grant, D.S.O., Indian Army.

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48th ... H. G. Gauntlet ... 4,515	181st ... C. W. Molony ... 3,445
67th ... D. Macdonald ... 4,299	186th ... P. J. I. Synnott ... 3,386
89th ... W. G. Bagot-Chester ... 4,115	190th ... R. M. Aylmer ... 3,339
90th ... A. G. Ottley ... 4,109	197th ... O. Gough ... 3,262
93rd ... A. P. Williams-Freeman ... 4,094	201st ... P. W. J. A. Stomm ... 3,151
115th ... D. M. Black ... 3,940	213th ... B. W. Molony ... 2,881
125th ... W. J. King-King ... 3,846	

WOOLWICH, JUNE, 1906.

31st	J. S. Barkworth	6,483
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DECEMBER, 1905.

SECOND ... H. G. MacGeorge ... 7,196	16th ... R. Crofton ... 6,330
FOURTH ... G. Walton ... 7,046	45th ... D. Stephenson ... 5,899
FIFTH ... H. A. Cox ... 6,967	54th ... J. Kennedy ... 5,711

This was the First Examination under the new regulations, and our pupils secured THREE out of the first FIVE places.

MILITIA COMPETITIVE, MARCH, 1906.

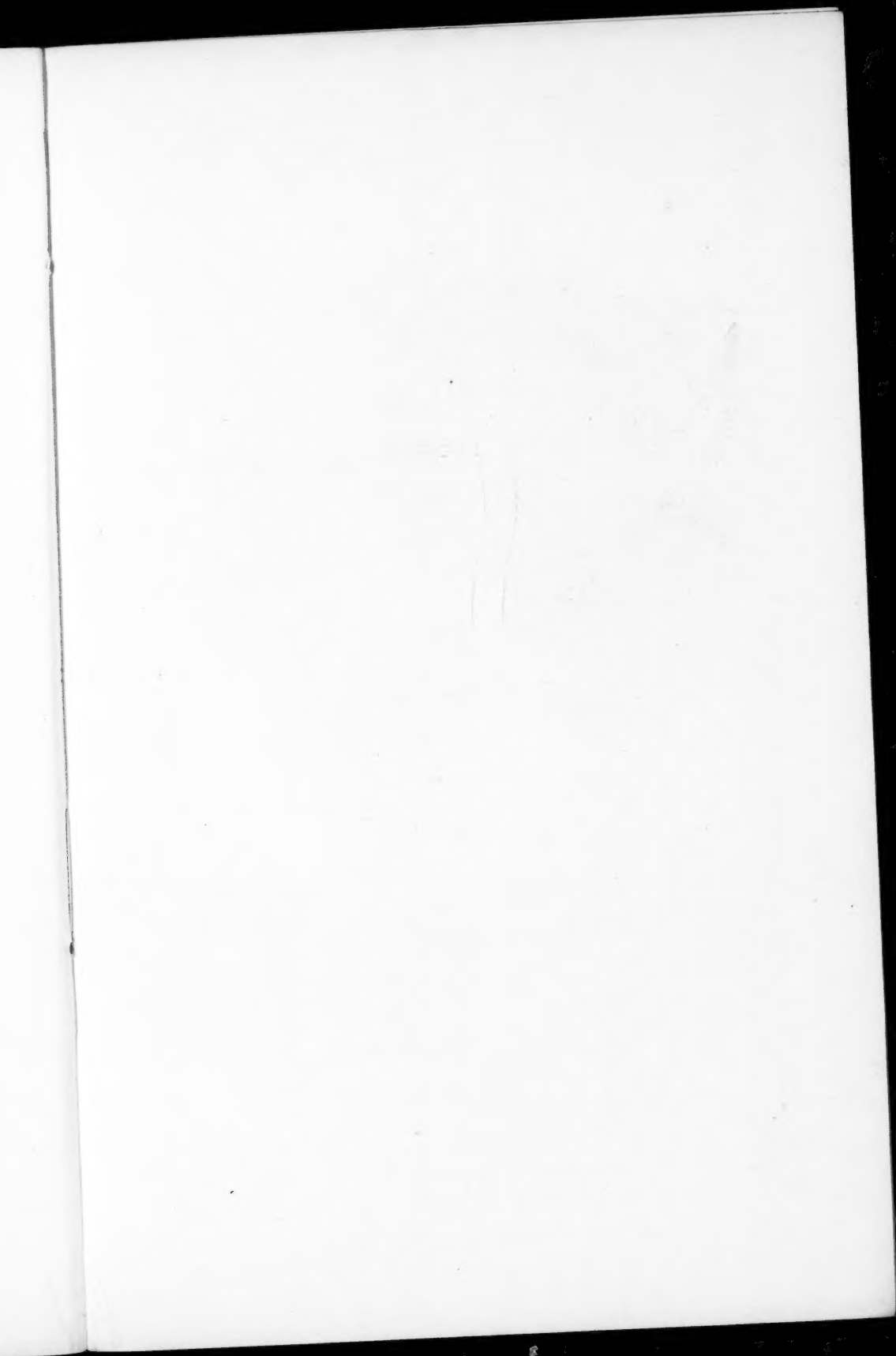
A. E. Hardy 2,304	W. F. Anderson 1,947
N. H. Hutcheson 2,105	D. C. Robinson 1,879
*F. D. Frost 1,949	F. A. Bowring 1,876

* Read partly at the Army College, Aldershot.

ARMY QUALIFYING, 1906.

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THE JOURNAL
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VOL. LI. JUNE, 1907. No. 352.

[Authors alone are responsible for the contents of their respective Papers].

SECRETARY'S NOTES.

1. The following officers joined the Institution during the month of May:—

Lieutenant C. G. Chichester, R.N.
Lieutenant W. D. Croft, Scottish Rifles.
Second Lieutenant L. H. Elphinstone, 14th Middlesex V.R.C.
Lieutenant H. C. Stahl, R.N.
Lieutenant G. W. E. Naper, R.N.
Sub-Lieutenant B. W. L. Owen, R.N.
Captain J. P. D. Wheatley, 1st Cumberland R.G.A. (V.)
Brigadier-General H. D. Fanshawe.
Captain A. G. Pritchard, Indian Army.
Major G. Vawdrey, A.S.C.
Second Lieutenant L. Timpson, Hampshire I.Y.
Lieutenant H. D. Watson, Indian Army.
Lieutenant R. W. Bromley, R.N.
Lieut.-Colonel R. W. Boger, R.F.A.
Second Lieutenant W. T. Towers-Clark, Coldstream Guards.
Lieutenant R. C. Dickinson, Welsh Regiment.

(No officer of the Militia or Royal Naval Reserve joined the Institution during the month.)

2 JOURNAL INDEX.—An index to Subjects and names of Authors appearing in the JOURNAL from 1887 to 1906 (Vols. XXXI. to L.) has been compiled, and may be obtained at a cost of one shilling (inclusive of postage) on application to the Secretary, Royal United Service Institution, Whitehall, S.W.

3. REGIMENTAL COLOURS.—The Secretary is prepared to arrange for repairs to Regimental Colours and Cavalry Standards, in service or otherwise, at the Institution. A very large number has already been received during the past three years, and the repairs are executed at as small a cost as possible.

4. ADDITIONAL LECTURE.—Colonel G. G. Aston, C.B., R.M.A., D.A.A.G., Staff College, will deliver a lecture on Monday, the 15th July, at 3 p.m., on "The Combined Strategy of Fleets and Armies." Admiral of the Fleet Sir A. K. Wilson, V.C., G.C.B., G.C.V.O., will preside.

5. LENDING LIBRARY.—Officers resident in the British Isles may borrow four volumes at a time from the Library on paying an extra subscription of ten shillings per annum. Further particulars will be sent on application.

6. CLOSING OF BUILDING.—The Building will be closed for cleaning purposes from the 5th August to the 17th August inclusive.

7. UNITED SERVICE INSTITUTION OF NEW SOUTH WALES.—The following is the subject for the Prize Essay for 1907:—

“The Use of Bush and Grass Fires in Attack and Defence.”

NOTE.—The above subject should be dealt with purely from an Australian point of view, and with reference to the natural timber and herbage found in the Commonwealth. It is desired to elicit, not merely the general principles for the use of conflagrations, but also the precautions to be observed, and the method of organising those detailed to carry out the application of the principles under various conditions.

The best Essay secures a Gold Medal and a prize of five guineas. Essays must be received before 1st December, 1907. All officers on the Active Lists are eligible to compete.

8. ROYAL ENGINEERS.—The Corps of Royal Engineers held their annual reception in the building on the evening of Friday, 14th June. The string band of the corps played a selection of music during the evening.

9. ADDITIONS TO MUSEUM.—(1) A Painting in Oils depicting the taking of Puerto Bello on 21st November, 1739, by Vice-Admiral Edward Vernon. Copied from the original work of George Chambers by Miss Maud M. Berry.—Bequeathed by Miss Minnie Berry.

(No officer of the British or Royal Naval Reserve joined the Institution during the month.)

2 JOURNAL INDEX.—The Index to the Journal and names of Authors appearing in the Journal from 1887 to 1906 (Vol. XXXI to L.) has been completed, and may be obtained at a cost of one shilling (inclusive of postage) on application to the Secretary, Royal United Service Institution, Whitehall, S.W.

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4 ADDITIONAL LECTURE.—Colonel G. B. Jones, C.B., R.N.A., D.A.G., Staff Colonel, will deliver a lecture on Monday, the 10th July, at 8 p.m., on “The Combined Services of France and Flanders.” Address of the Price Sir A. E. Wilson, V.C., G.C.B., G.C.V.O., will be made.

NATIONAL AND NON-NATIONAL ARMIES:

A STUDY IN MILITARY HISTORY:

By Mr. J. ELLIS BARKER.

On Wednesday, 27th February, 1907,

Field-Marshal the Right Hon. Earl ROBERTS, V.C., K.G., etc.,
in the Chair.

AMONG the branches of military science military policy is, no doubt, the most important, for it provides the subject matter to the military organiser and administrator, and furnishes the sword to the strategist. Every statesman ought to have some considerable knowledge of military matters, because, in the words of a military classic, "War is merely the continuation of political action by different means,"¹ and he ought, before all, to study military policy as the military policy of the State is directed, rather by the civil than by the military power. At the present moment, when the military system of Great Britain is in a state of transition, and when the nation is hesitating in the choice of a military policy, it is most important to consider the aspect of the various military systems from the points of view of the strategist, the statesman, the economist, and the citizen, so that we may learn what military policy this country ought to follow.

All Armies may be divided into two classes: National and non-National ones. National Armies are composed of the voluntarily united citizens of the whole nation; non-National ones are composed of those citizens who are compelled to enlist against their will, either by force or by poverty, for it seems immaterial whether the fear of imprisonment or the fear of starvation is the compelling factor. Compulsory service, when cheerfully accepted by practically the whole nation, creates a National Army. The Armies of Germany and France are National Armies, whilst the Russian Army is not a National Army. Voluntary enlistment, which is a misnomer when destitution supplants the free will and drives men into the ranks, does not create a National Army. Let us carefully weigh the advantages and disadvantages of National and non-National Armies against each other.

THE EVIDENCE OF HISTORY.

Military science, like every practical science, is based upon experience. As no history of military policy and no satisfactory general history of the art and institutions of war exists—the works of Jähns, Carrion Nisas, Delbrück, Rüstow, Gallitsyn, and others are unsatisfactory—I will take a bird's-eye view of the military history of

¹ Clausewitz, *Vom Kriege*, Vol. I., 29.

the world, which will make it clear that National Armies are superior to non-National Armies, and that many of the greatest and most prosperous States have perished because they lacked a National Army.

Ancient Egypt was a powerful and very wealthy State. Her defence was entrusted to a National Army of 400,000 men who formed one of their great castes similar to the Samurai. Like the Samurai the Egyptian warriors were given farms for their subsistence, for, according to Diodorus, the Egyptians thought it dangerous to leave the defence of their country to men who had no interest in its preservation.¹ As long as Egypt trusted to a National Army, she preserved her wealth and power. However, in the seventh century before Christ, King Psammetichus formed an army of Greek mercenaries from Ionia and Caria, presented them with lands, and ill-treated the Egyptian soldiers. The majority of the Egyptian warriors, 240,000 in number, emigrated to Ethiopia, and Egypt had to rely chiefly on foreigners for her defence. The Persians, who were originally a poor and hardy race of mountaineers, attacked Egypt for the sake of plunder with their National Army, and a single battle, that of Pelusium in 525 B.C., destroyed the greatness and power of Egypt, and ever since the country has been ruled by foreigners.²

The Persians, having conquered the rich lands of Asia Minor and Egypt, became exceedingly prosperous. Their ancient discipline was relaxed, their National Army was replaced by soldiers taken from the slums³ and by levies from the subject nations. When Xerxes attacked Greece no less than fifty-six different nations were represented in his army, in which Persians formed a small minority.⁴ These vast hordes were easily shattered by the National Armies of Greece.

At that time all Greek citizens bore arms. They considered military service to be not a burden but a privilege. All freemen, high and low, rich and poor, fought side by side, and the best citizens were the best soldiers. Practically the whole population, from twenty to sixty years, was trained for war. Soon after the Persian wars, Persian customs corrupted Greece. Having broken the power of Persia, and believing themselves henceforth secure from all aggression, arms were neglected, hired troops recruited from the proletariat replaced the citizen armies. The Peloponnesian War, which broke out about fifty years after the battle of Salamis, was, according to Thucydides, fought chiefly by mercenaries. A hundred years after the battle of Salamis, Isocrates complained: "Formerly mercenaries were unknown with us, but now our position is such that it is far easier to raise an army of vagabonds than a citizen army." The Greek States relied on their wealth for their defence. Philip II. of Macedon, attacked Greece with his National Army. The mercenary troops of Greece were routed, and the greatest heroism of the enthusiastic but ill-trained national volunteers—I would instance the total destruction of the sacred band of Thebes at the battle of Chaeronea—could not save the situation. The Greeks who, as Aristotle

¹ Diodorus Siculus, I.

² Herodotus, II., 152, 154, 164, 168; III., 11, 13.

³ Xenophon, Institutions of Cyrus, Book VIII.

⁴ Herodotus, VII., 59, 100.

⁵ Isocrates, Eighth Oration.

had rightly said, were by nature qualified to rule the world,¹ became, like the Egyptians and Persians before them, a subject race, and have since then been ruled and plundered in turn by Macedonians, Romans, Goths, Byzantines, Turks.

Phœnicia was the greatest maritime and colonial Power of antiquity. Her citizens had, no doubt, gained their predominant position in the world by their own arms. When Phœnicia was at the summit of her prosperity she relied for her defence on her fleet and on subject races and Colonial troops. Persians, Libyans, Lydians, and others garrisoned the great Phœnician towns.² The mighty neighbours of Phœnicia despoiled her of wealth and power, and Alexander the Great completed the ruin of the country by the capture and destruction of the island city of Tyre. The desperate resistance of the Phœnician Volunteers at the siege of Tyre was useless.³ The rich fled by sea to Carthage, a Phœnician colony, the poor were killed or sold as slaves, and Carthage became the heir of the great Phœnician world-empire in the same way in which, after a crushing defeat of Great Britain, the United States might become the heir of the British Empire.

Carthage ruled the sea and was exceedingly wealthy; Rome was poor. The struggle for existence caused war to break out between these two Powers, and, notwithstanding the genius of Hannibal, Carthage was defeated because, as Polybius, the foremost authority on the Carthaginian wars, tells us: "The Carthaginians employed mercenaries, whilst Rome fought with a National Army."⁴ In the words of a modern historian: "Rome trusted to itself and its sword; Carthage to its gold and its hired soldiers. The greatness of Rome was founded upon a rock; that of Carthage upon sand and gold-dust."⁵ The Carthaginians possessed a huge army of native volunteers for home defence, but their heroic resistance could not save Carthage from destruction.

After the fall of Carthage Rome became the mistress of the world and exceedingly wealthy. Believing her position unchallengeable she neglected her Army. Vegetius tells us: "The security of a long peace altered the dispositions of the Romans, drew them from military to civil vocations, and created among them a love of ease and idleness. Military discipline, after having been neglected, disappeared entirely."⁶ Universal service fell in abeyance. The Roman soldiers were recruited from the starving proletariat of the overgrown towns, and from allied and foreign nations.⁷ The barbarians invaded Italy, and, meeting with feeble resistance, plundered the country. The Roman Emperors removed, for the sake of safety, the centre of the Empire to Constantinople, in the same manner in which, after a successful invasion of Great Britain, the Imperial Government and the centre of the British Empire might be removed from London to Montreal.

The huge West Roman Empire, with Constantinople as a capital, relied for defence on a voluntary Army, recruited from the slums,

¹ Aristotle, *Politics*, IV., 7.

² Ezekiel, XXVII., 10, 11.

³ Arrian, I.; Diodorus Siculus, II.

⁴ Polybius, I., 6; VII., 3.

⁵ Heeren, *Historical Researches*, Vol. I., Chap., VIII.

⁶ Vegetius, *De Re Militare*, I.

⁷ Tacitus, *Historiæ* IV., 14; Plutarch, *Tiberius Gracchus*; Herodian II., 6, 7.

reinforced by foreign mercenaries. Attacked by the National Armies of the Turks, Constantinople and the West Roman Empire fell in the fifteenth century.

During the sixteenth century Spain became the greatest and the wealthiest Power in the world. She possessed the strongest Navies and Armies, and the richest colonies. Her wars were fought with mercenaries. The Netherlandish provinces of the Spanish Empire revolted against Philip II. War ensued, and the military power of Spain was destroyed by the national levies of the Dutch.

World-empires usually arise on the ruins of their predecessors. The wealth and the colonies of Spain fell into Dutch hands. Pursuing a commercial policy and confiding in the impregnable position of their water-girt and strongly fortified provinces, the supremacy of their Navy and their glorious military past, the Dutch neglected their land Armies. The defence of the country was left to Dutch paupers and foreign mercenaries. The Dutch were attacked by Louis XIV., and the Netherlands, which, when weak and poor, had, with a National Army, resisted Spain during eighty years of war, were over-run by French Armies in less than forty days. The Dutch world-empire crumbled to pieces, England became the heir of the Netherlands, New Amsterdam was re-christened New York. Had the Dutch possessed a national policy and a National Army, the world might have become Dutch instead of Anglo-Saxon.

The foregoing sketch history is, of course, very imperfect for various causes, apart from military ones, contributed to the fall of the great and prosperous States mentioned. At the same time it cannot be denied that nearly all the world-empires of which we have knowledge succumbed—and usually they succumbed after a single blow—because they had entrusted their defence to non-National Armies instead of relying on their own strength.

Let us now leave ancient history and consider the more modern methods of Army organisation and warfare in order to understand the conditions and requirements of modern war.

Up to the time of the French Revolution war was waged by hired soldiery. In the words of Frederick the Great: "Armies were composed only of the dregs of the nation, of loafers, drunkards, vagabonds, and other worthless subjects, who shunned work and sought a life of licence and adventure."¹ Enlistment being largely voluntary armies were small and costly, and wars were, as a rule, long drawn out. They were rather trials of endurance than trials of strength between nations. A glance at the warfare of Frederick the Great will help us to understand the difference between pre-revolutionary and modern warfare and military policy.

Frederick the Great had an excellent standing army of about 200,000 professional soldiers. A large portion of these, from one-third to two-thirds, were foreigners. His troops were exceedingly well-trained, discipline was cruelly severe, the soldier was an instrument, the Army was a machine, there was practically no trained reserve. "One could replace the men lost in battle—supposing that a sufficient number of recruits could be obtained—as regards numbers, but one could not replace the soldiers as regards quality."² Frederick the

¹ Frederick the Great, *Anti Machiavel*, Chap. XII.

² Frederick the Great, *Histoire de la Guerre de Sept. Ans*. Introduction.

Great had to economise his forces to the utmost. Consequently, he tried to defeat his opponents rather by manœuvring than in battle, and fought on an average only one or two battles per year during the Seven Years' War. The change from the cautious, slow, and laboured Frederickian warfare to the lightning-like warfare of Napoleon, was due to a change in military policy. Frederick the Great commanded in battle only from thirty to forty thousand men, whilst Napoleon commanded in battle from one hundred thousand to two hundred thousand men. Thanks to the size of his Armies, Napoleon could, after a victorious battle, march straight upon the enemies' capital, detaching half his forces for defending his line of communication. But Frederick the Great could obviously not defend his line of communication with twenty thousand or thirty thousand men, and march with an Army of similar strength upon Vienna, although the distance which separated him from Vienna was trifling. Lacking sufficient men, his battles had to be fought in easy reach of his magazines, exactly as Wellington's battles, also for lack of men, had to be fought in easy reach of the English Fleet. Frederick the Great was situated like a shop-keeper with an insufficient working capital.

When the French Revolution broke out, practically all Europe made war upon France in the slow Frederickian method. France was, at the same time, invaded from all sides and torn by the great Vendean rising. The number of volunteers was insufficient for the defence of the country. The position of France was desperate. A heroic remedy was applied. By the edicts of the 23rd of August, and the 7th of September, 1793, conscription was introduced. All able-bodied Frenchmen were called to arms, and with incredible rapidity fourteen Armies and 1,200,000 men were raised. Necessity had created the nation in arms. The enormous Armies of France easily scattered the foreign invaders and carried the war into the heart of the enemies' country, and, having an unlimited number of men, the thrifty pennywise strategy of cautious moves and counter-moves could be thrown aside.

Whilst France had created a National Army, Prussia had preserved her unnational one, having religiously adhered to Frederickian traditions and the Frederickian policy. In 1799 Scharnhorst wrote: "The French have the immense advantage that they can make war with their whole able-bodied population whilst other nations fight with only one-tenth of their able-bodied population."¹ Seven years later, on the 12th of April, 1806, Scharnhorst wrote in a memoir: "Only by arming the whole mass of the people can a small nation obtain some sort of equality of power when defending itself against the attacks of a larger State. In no State can a National Militia be organised more easily than in Prussia. Unfortunately we have come to value more the art and technique of war than military virtues. By that mistake the great nations of all times have perished. Courage, self-sacrifice, intrepidity are the foundation of national independence. Without these we shall be lost, even if we should be victorious in battle."² The warnings of Scharnhorst, and of other Prussian patriots, that Prussia was no longer abreast of the times, that a thorough reform of her military organisation was required were not heeded. Six months after the foregoing remarkable phrases were penned war broke

¹ Lehmann, Scharnhorst, I., 332.

² Lehmann, Scharnhorst, I., 379.

out between Prussia and France, and on the 5th of November, 1806, at the battle of Jena, Prussia, which had resisted the whole continent of Europe, during seven years, succumbed at one blow and was dismembered.

After this terrible defeat Prussia recognised the value of Scharnhorst's advice and resolved to create a National Army. On the 31st August, 1807, Scharnhorst drew up a re-organisation scheme. The first article of that interesting document stated, "All inhabitants of the State are bound to defend it." The celebrated General Gneisenau added to Scharnhorst's scheme a *Memoir Regarding the Military Organisation of Schools*, in which he recommended "A strict military discipline should be introduced into all schools, everyone of which should be supplied with a drill-master. The use of arms should be practised, companies be formed, the scholars should themselves elect their captains, and the principles of discipline should be taught. The bodies of the scholars should be hardened by appropriate gymnastic exercise preparatory for war."¹ Prussia introduced the policy lately recommended to Great Britain by Lord Roberts. Wishing to break her fetters, Prussia converted the country into a huge camp, created a National Army, attacked, in 1813, Napoleon, and conquered her independence. Having learnt by bitter experience the value of a National Army as a means of defence, she preserved universal compulsory service, which originally had been introduced only with the object of throwing off the intolerable yoke of France.

The endless wars of Napoleon had created widespread dissatisfaction in France. The National and Voluntary Army of the Revolution had, by the weariness of twenty years' warfare, become a compelled and non-National one. The military enthusiasm was gone. Desertion and self-mutilation of recruits were frequent. When Napoleon fell, France cried for relief from conscription, and in 1814 Louis XVIII. issued an edict which stated "the conscription is abolished. The Army is recruited by voluntary enlistment." That edict was greeted with the greatest enthusiasm.

After 1860 the relations between Prussia and France became strained. Prussia, after having conquered for herself the hegemony in Germany, strove to create a united Germany and to acquire the hegemony in Europe, which hitherto had been held by France. A war between Prussia and France seemed unavoidable. Whilst Prussia had preserved and improved her National Army, which the disaster of Jena had called into being, France had denationalised hers. France had an excellent intelligence officer in Prussia—Baron Stoffel, who was military attaché to the French Embassy. His reports of the Prussian Army are classical. In one of them he shows that "war is inevitable between France and Germany," and under the heading, "Want of Foresight of France—Fatal Consequences," he writes:—"The North German Confederation will dispose of one million trained, disciplined, and strongly-organised soldiers, while France has barely three hundred thousand to four hundred thousand men. Whilst the German Federal Army embraces all the manhood, all the intelligence, all the *vis viva* of the nation full of faith, energy, and patriotism, the French Army is almost entirely composed of the poorest and the most ignorant portion of the people." After having spoken of the torpor and degeneration of France, he urges the need of systematically

¹ *Militär-Wochenblatt*, Beiheft, 1854, 82, 94.

regenerating the nation, writing: "Chief among the regenerative institutions there are two: compulsory military service and compulsory education." However, Baron Stoffel thought the chance of introducing the former very small, for "Infatuated with itself and perverted by egotism, the nation will, with difficulty, conform to an institution of which it does not even suspect the strong and fruitful principle, the application of which requires virtues which France does not possess, such as self-denial, self-sacrifice, love of duty. Nations, like individuals, correct nothing in their lives unless taught by bitter experience, and do not reform their institutions unless compelled to do so by disasters—A Jena was necessary to teach Prussia to reform herself."¹

Eleven months after these remarkable words were written France experienced her Jena at Sedan. Baron Stoffel was a prophet crying in the wilderness. Misled by the delusive arguments of some eloquent politicians, and preferring ease to duty, the French nation did not listen to the voice of the experts. The Franco-German War again proved the superiority of the National over the non-National Army. After her disastrous defeat, France reformed her Army and introduced universal military service.

In the Boer War a National Militia, not a National Army, fought the united forces of the British Empire, and an almost tenfold numerical superiority was required to crush the stubborn farmer-soldiers. Had the Boers possessed a National Army instead of a Militia, had their troops possessed a military organisation, discipline and cohesion, they would very likely have defeated the British Empire and conquered South Africa. Had the Boers, as they were told, marched straight upon Durban and Cape Town, disregarding Ladysmith, Kimberley, and Mafeking, and had they cleared the country of all rails, and "salted" cattle and horses, the reconquest of South Africa might have been impossible for the British Empire. In the Russo-Japanese War, again, a National Army defeated a non-National Army of the compulsory type.

CAUSES OF SUPERIORITY OF NATIONAL ARMIES.

The foregoing examples seem clearly to prove the superiority of National over non-National Armies in ancient history, and in modern war. What are the causes of that superiority?

The superiority of National over non-National Armies arises from three causes:—

1. A National Army possesses far more moral value than a non-National Army.
2. A National Army possesses far greater numerical strength than a non-National Army.
3. A National Army possesses far greater intelligence and a far better physique than a non-National Army.

Let us consider these three causes one by one.

THE MORAL FACTOR.

In the words of Clausewitz: "The most valuable lesson which the strategist can derive from the study of history is this, that it

¹ Baron Stoffel, Report 12th August, 1869.

shows the incredible influence of the moral factor; that it shows that military virtues are to the soldiers what genius is to their general."¹ In the words of the late Colonel Henderson, who might have become another Clausewitz had he lived long enough: "The first thing is to realise that in war we have to do not so much with numbers, arms, and manœuvres as with human nature." "Moral force," said Napoleon the First, "is to physical force as is three to one."² In the words of Brasidas, the great Spartan general: "Three things are required in a soldier: firmness of will, sense of shame, and obedience to orders."³ In the words of Julius Cæsar: "Modesty and self-restraint are as precious in soldiers as courage and high-mindedness."⁴ "An Army is an organism, not a machine. In all periods of war, under all conditions of arms, the moral forces which affect Armies have been the great determining factors of victories and defeat."⁵ In the words of Prince Bismarck, who possessed military knowledge and intuition to the highest extent: "In war moral power and discipline is everything."

Historical experience tells us that the moral value of non-National Armies is a very low one. Beholding the ruin of the Roman Empire, which had fallen because it had entrusted its defence to hired soldiers, the father of military science wrote more than fifteen hundred years ago: "On the careful choice of recruits depends the welfare of the State. The men to whose hands the defence of the Empire and its whole future are committed should be respectable men of high moral standing, for such men will be good soldiers. Their sense of honour will make them high-minded and victorious, but little good can be expected from men of a low type, even if they are well drilled and have been on active service. An Army composed of inferior recruits never distinguished itself, and by terrible experience have we learned that there lies the source of our misfortune."⁶ Seeing Italy overwhelmed by foreign nations, which had easily defeated the non-National Armies of the Italian Republics, Machiavelli wrote, four centuries ago: "Those soldiers are little to be depended upon who have no other motive for fighting than their pay, for their small pay does not, and cannot, suffice to make them fight bravely and die willingly for the country which has hired them. Soldiers who do not fight from love for their country will make but a feeble resistance if vigorously attacked, and as self-sacrifice and heroism cannot be expected in mercenaries, the rulers of kingdoms and Republics ought above all things to create National Armies, as all great nations of the past have done."⁷ Beholding the decline of England under Charles II. and James II., Sir Algernon Sidney wrote, two centuries ago: "No State can be said to stand upon a steady foundation except those whose strength is in their own soldiery and the body of their own people. Such as serve for wages often betray their masters in distress, and always want the courage and industry which is found in those

¹ Clausewitz, *Vom Kriege*, Vol. I., 212, 217.

² Henderson, *Science of War*, 174.

³ Thucydides, V.

⁴ Cæsar, *De Bello Gallico*, VI.

⁵ General Maurice, in *Encyclopædia Britannica*, Vol. XXIV., 343.

⁶ Poschinger, *Tischgespräche*, II., 435.

⁷ Vegetius, *De Re Militaire*, I.

⁸ Machiavelli, *Discorsi*, Book I., Chap. XLIII.

who fight for their own interests and are to have a part in the victory. The business of mercenaries is so to perform their duty as to keep their employment, and to draw profit from it, but that is not enough to support the spirit of men in extreme danger. The shepherd who is a hireling flies when the thief comes."¹

The history of all time proves the moral inferiority of hired soldiery. At the beginning of the war between Parliament and Charles I., 22,000 men were impressed by the former. "Clergymen, scholars, students at the Inns of Court and Universities, the sons of esquires, persons rated at £5 goods or £3 land, and servants of Members of Parliament, were excepted."² The Parliamentary Army was an armed mob composed of "decayed serving men and tapsters, and such kind of fellows," as Cromwell picturesquely put it,³ and it was miserably beaten by Charles I. Like every great general Cromwell attached the highest value to the moral factor in war. Seeing in the spirits of "these low and mean fellows" the cause of the numerous defeats of the Parliamentary troops, Cromwell raised a National Army, composed of substantial freeholders, who defended their country, their faith, and, let it not be forgotten, their property against Charles I., and these men "made some conscience of what they did and were never beaten." In the Franco-German War of 1870-71, the French Army was easily defeated by the German Army, largely in consequence of the superior moral force of the latter. Nominally every Frenchman had to serve, but as those who could afford it were allowed to furnish *remplaçants* — a substitute could, in 1869, be obtained for 2,400 francs—the soldiers belonged almost exclusively to the poorest, lowest, and least intelligent section of the population. The Army was a caste in the nation. The burden of military service rested upon the poorest, the least instructed, and the least healthy section of the people. The soldiers were the pariahs of French society, paupers, who, according to Bazaine, were generally considered only fit to be food for powder.⁴ The moral weakness of the French troops converted every defeat into a rout, every retirement into a wild flight, every non-success into a disaster, dissolved all bonds of discipline, and converted the regiments into a raving mob, which wreaked its vengeance upon the officers. Zola's "Débâcle" gives a faithful picture of the frightful moral breakdown of the French Army. Cromwell's soldiers, the Germans, when fighting against Napoleon I. and Napoleon III., the Boers and the Japanese fought for hearth and home; armed paupers and adventurers, who have no hearth and home, fight merely for their pay. They fight, not for their country in which they have no stake, but for their more prosperous fellow-citizens, who are unwilling to fight themselves. Hence a so-called Voluntary Army is a Pauper Army, which possesses all the pauper characteristics. It is chronically dissatisfied, and is

¹ Sir Algernon Sidney on Government, Chap. II., 21.

² Firth, Cromwell's Army, 21.

³ Cromwell's Speech, 13th April, 1657.

⁴ Cromwell's Speech, 13th April, 1657.

⁵ Les Causes de nos Désastres, 91.

⁶ Boulanger, L'Invasion Allemande, I., 36.

⁷ Lehautcourt, Histoire de la Guerre, II., 56.

⁸ Bazaine, Episodes de la Guerre, XXV.

apt to refuse fighting at the moment when its services are most needed. The fall of Carthage was accelerated, if not caused, by the revolt of the mercenaries described by Polybius.¹ In 1797, during the war with France, a strike of the sailors for higher pay, twice laid up the British Fleet at a most critical moment. If Great Britain preserves her Voluntary Army, she must be prepared to see history repeating itself when the enemy is imperiously knocking at the gate. A non-National Army possesses little moral value, and is unreliable, especially in adversity.

It is true that some non-National Armies, such as those of Hannibal, Marlborough—who was a second Hannibal—and Wellington, have shown the greatest heroism, but these Armies fought for exceptional men. The mercenaries, who served under generals such as Hannibal, Marlborough, and Wellington, saw in them their cause and their country. Such leaders arise hardly once in a century, and though they are able to fashion excellent Armies out of the worst material, they cannot do so quickly. In modern war blows fall with lightning speed. Therefore, it is now hardly possible to improvise Armies after the outbreak of war. The futile resistance of Gambetta's Armies in the Franco-German War has made that point clear. France was not given the time to draw on her latent resources and to "organise victory," as in the times of Carnot.

NUMBERS IN WAR.

Clausewitz, Jomini, and Hamley teach that the whole art of war consists in striking with greater strength the right point at the right moment "Providence," Napoleon used to say, "usually fights on the side of the big battalions." The great numerical superiority of National Armies is certain to give them the victory over non-National ones. Victories such as those of Charles XII. of Sweden over the Russians happen nowadays only between white men and savages. The armament and tactics of all European nations are practically uniform. Therefore, modern wars between white people are apt to be decided by superior numbers. In 1870 France was swamped by the vast hosts of Germany, which bore all before them. At the beginning of August, France had 332 battalions, Germany 474 battalions; France had 220 squadrons, German had 382 squadrons; France had 780 guns, Germany had 1,584 guns.² In the great numerical superiority of the German Army Napoleon III. saw the direct cause of his defeat, for he told us in his "Oeuvres Posthumes":—"The troops we might have to face would be either 330,000 men of Prussia alone, without the Southern States, or 420,000 men of united Germany, against which we were able to oppose 400,000, if the calculations of the Minister of War were correct, and if there had been sufficient time to get them together. Thus, although according to official data the number of fighting men was 588,000, there were reckoned only 385,000 for the Army of the Rhine. It seemed, therefore, as if a very large allowance had been made for unfavourable eventualities. What a bitter deception the chief of this Army must have experienced when, at the end of three weeks, the eight army

¹ Polybius, I., 3, 5, 6, etc.

² Generalstabswerk, I*, 30*.

corps sent to the frontier did not furnish more than about 220,000 men! This inconceivable difference between the number of men present under the colours and those who ought to have been there is a most striking and deplorable example of the vicious character of our military organisation. The transition from a peace establishment to a war establishment was far more protracted than was expected, and this was the chief cause of our reverses.

"Instead of having in line, as might have been expected, 385,000 men to oppose the 430,000 of Northern Germany combined with the Southern States, the Army, when the Emperor arrived at Metz on the 25th July, amounted only to 220,000, and, moreover, not only were the effectives not up to their full complement, but many indispensable accessories were wanting."¹

On paper the German and French forces stood approximately in the proportion of two to one. If the moral factor be taken into account the German and French forces stood in the proportion of three to one. Therefore, the war was lost for France before it was begun. At Weissenburg 50,950 Germans defeated 5,300 Frenchmen, and 144 German guns played upon but 18 French guns; at Wörth 97,650 Germans attacked 48,550 Frenchmen and 342 German guns easily silenced the 167 French guns opposed to them; at Spichern (Forbach) 34,600 Germans, with 108 guns, routed 27,600 Frenchmen with 90 guns; at Gravelotte, 187,600 Germans with 732 guns defeated 112,800 Frenchmen with 520 guns; at Sedan 154,850 Germans with 701 guns defeated 90,000 Frenchmen with 408 guns.² Germany's successes in the war were due, perhaps, not so much to superior generalship as to superior numbers and superior *morale*, factors which her National Army supplied. On the 4th of August the German attack commenced. On the 6th of August, two days later, when the battles of Weissenburg, Wörth, and Spichern had taken place, the war was, according to a competent French writer, lost for France.³ In two days the mighty French Empire was humbled to the dust. When a National Army meets a non-National one, the first encounter is frequently decisive, as may be seen by the battles of Jena, Eckmühl, and Königgrätz.

INTELLIGENCE AND PHYSIQUE.

National Armies being composed of men of every class, rank, occupation, and profession, possess greater intelligence than Armies composed of paupers and adventurers. When recruits are drawn almost entirely from the lowest stratum of the population, every desire of progress and every reform is hampered by fears that it may unfavourably affect recruiting. Therefore, non-National Armies stand still whilst National Armies advance. Whilst non-National Armies are constitutionally conservative, and are military machines directed by routine, National Armies and Militias have brought about nearly every progress in intelligent warfare and nearly every improvement in tactics. The British National Army, which fought at Crecy, Poitiers, and Agincourt, the Hussites who fought at Deutschbrod, Aussig, Taus, and the Swiss National levies, who fought at Morgarten,

¹ Napoleon III., "Oeuvres Posthumes," IV., V., VI.

² Kriegschichtliche, Einzelschriften, 1889, Part XII., 837.

³ Les Causes De Nos Désastres, 65.

Sempach, Granson, Morat, destroyed the power of mailed knighthood and created modern infantry. The revolted Americans and the soldiers of the French Revolution destroyed the linear tactics and created the modern loose formations. The latest revolution in tactics and the latest improvements in field fortifications and permanent fortifications, were invented by the Boers.

The physique of National Armies is better than that of non-National Armies of the same race, as a comparison of German and English recruits will show. The causes of this difference are obvious. The Germans can pick their recruits from the whole population, whilst the British Army can pick its recruits only from the stunted and underfed youths who voluntarily enlist. Therefore, a British Army seems unlikely to be able to compete with a National European Army in marching power and endurance, two most important factors in modern warfare.

The foregoing shows that non-National Armies are greatly inferior to National Armies in moral force, that is courage, fortitude, devotion and obedience; in numbers, in intelligence, and in physical strength and endurance; and it follows that the British Army compares very unfavourably with the Armies of other nations, against which it may have to fight.

DISADVANTAGES OF THE BRITISH MILITARY SYSTEM.

It may be objected: "It is true that a National Army is, generally speaking, far superior to a non-National Army. Nevertheless, in the case of Great Britain, an army raised by voluntary enlistment is sufficient and, on the whole, preferable to a National Army":—

1. Because Great Britain has hitherto done very well without a National Army.
2. Because no nation threatens this country.
3. Because Great Britain rules the sea and can rely on her fleet for her defence.
4. Because this country has allies who possess powerful Armies.
5. Because International Arbitration is likely soon to abolish war.

Let us examine these arguments one by one.

As regards the first objection, I think Great Britain has hitherto not done very well, but has done very badly because she lacked a National Army. Had she possessed a National Army, the American Revolutionary War would probably never have occurred, firstly, because the American Colonies would have been too weak to resist a British National Army; secondly, and principally, because universal military service is a most powerful argument in favour of peace. An army of mercenaries, a Voluntary Army, can be used for any war, one might almost say for any crime, because such an army obeys blindly, but a National Army can be used only for a National purpose. An unpopular war cannot be carried on by a National Army. The British Parliament would have been juster to the claims of the American colonists had the brothers and sons of Cabinet Ministers, and of Members of both Houses of Parliament, been obliged to shoulder a rifle and fight the Americans. At the time of the American Revolution the British Army was to the men in Parliament merely the executioner of their will, and they hired Hessians and other German troops to do the fighting for them. Had Great Britain

had a National Army, she might have preserved her American Colonies and might have saved to the tax-payers £200,000,000, the cost of the war. We may now trace the loss of our most precious colonies to the lack of a National Army, and may not similar, and perhaps greater, disasters arise in the future from the same cause?

Owing to our lack of a National Army, Napoleon I. was at liberty to devastate the continent of Europe during twenty years. Had Great Britain been able to land 300,000 men at Dieppe and march with 150,000 men upon Paris—the distance could easily have been covered in less than a week—Napoleon would never have ventured to march upon Berlin, Vienna, Madrid, and Moscow. By a cheap demonstration, by merely assembling a fleet of transports at Portsmouth, Napoleon's activity might have been stopped and the peace of Europe been maintained. The military weakness of this country let Napoleon loose on Europe. The Napoleonic wars needlessly devoured several million human lives, and cost this country approximately £1,000,000,000. These fearful losses might have been avoided, had Great Britain been strong on land.

Lastly, owing to the absence of a National Army, the Boer War cost Great Britain 20,000 lives and £250,000,000. Had this country possessed a National Army, the Boers would never have ventured to go to war with Great Britain. It is not true that Great Britain has hitherto done very well without a National Army.

As regards the second objection, it must be admitted that no nation threatens Great Britain *at present*, but we cannot foresee the future. Ten years ago no one would have thought it possible that Great Britain would require 500,000 men to defeat the Boers, or that Japan would defeat Russia, or that France and England would be friends notwithstanding Fashoda, or that Germany would make a determined bid for the rule of the sea. The political situation is apt to alter as suddenly as the weather in April. Therefore, it is as foolish to ask: "Against which nation do we require a National Army?" as it is to ask: "Against which burglar do we require a bolt on the front door?" It usually is too late to fix a bolt on one's door when one knows against which burglar it is required. Armies are living organisms of very slow growth, and they cannot be improvised when we have the misfortune to know against which Power they are required.

As regards the third objection, it is true that Great Britain rules the sea, but she may not always rule the sea. Wealthier nations may secure the rule of the sea, and, unless the British Empire be unified, Great Britain alone with her almost stationary population, may financially be unable to maintain her naval supremacy against the United States or even against Germany. Besides, history teaches us that the foremost naval Powers have been defeated either by coalitions and the defection of allies, as were the Phœnicians and Venetians, or by surprise as were the Genoese and the Dutch. Forty years ago the Austrians destroyed by surprise the far more powerful Italian Fleet at Lissa,¹ and the Japanese, also by surprise, inflicted serious damage on the Russian Fleet at Port Arthur. Naval supremacy may further be lost by new inventions. The *corvus* of Duilius destroyed the maritime supremacy of Carthage in a few hours, and in the America Civil War a single ship of a new type, the "Merrimac," destroyed

¹ This statement is hardly accurate. The Italian fleet was not taken by surprise, and, although defeated, was a long way from being destroyed.—Ed.

the weak squadron of old sailing-ships opposed to her. A new electrical invention may conceivably have similar consequences to Great Britain. Lastly, this country may be invaded at a time when the fleet is busy in a distant quarter of the world, for it cannot permanently be kept in home waters. The history of Phœnicia, Carthage, Venice, and the Netherlands, which once ruled the sea, teaches us that it is dangerous for a nation to entrust its fate entirely to its ships. Let us, therefore, put the utmost trust in the Blue Water School, but let us, at the same time, provide an alternative means of defence. It would be insane to stake the existence of Great Britain on a single card.

As regards the fourth objection, it is true that Great Britain has powerful allies, but let us not forget that no one helps those who do not help themselves. The binding force of treaties is precarious, the reliability of allies uncertain, and the number of broken treaties beyond counting. A great nation can rely only on its own strength. A nation which is believed to be strong can always get allies. A nation in distress is usually deserted. Foreign nations conclude alliances not with the British nation but with the British Fleet.

As regards the fifth objection, let us hope that Compulsory International Arbitration will cause the wolf to lie down beside the lamb, but let us not entrust our national possessions to the benevolence of other nations until Compulsory International Arbitration has actually, and very firmly, been established. Until then let us trust in God and keep our powder dry. War is, no doubt, a great evil, but it is apparently a necessary, or at least an unavoidable, evil. Since the time of Amphictyonic Council, innumerable attempts have been made to decide differences between nations by arbitration, but hitherto all these attempts have failed because the strongest motive of individuals and of States is self-interest, and because nature is ruled by the law of the struggle for existence and the survival of the fittest and strongest. Therefore, we can hope for universal peace only if the universal law of the struggle for existence and the survival of the fittest be abolished. Until then we ought to believe with George Washington: "If we desire to avoid insult we must be able to repel it. If we desire to secure peace, it must be known that we are at all times ready for war."¹

SUPPOSED ADVANTAGES OF THE BRITISH MILITARY SYSTEM.

Those who believe that Great Britain ought not to change her military policy, that she ought to preserve her Voluntary Army, may argue: "It is true that, considered from the historical, political, and military point of view, in short, from national considerations, the British military system is to be condemned, but, looked at from the economic and social points of view, from the point of view of the individual tax-paying citizens and workers, it possesses great compensating advantages, namely:—

1. Our Voluntary Army is cheaper than would be a National Army.

2. Our Army is a splendid refuge for the unemployed

Let us look into these arguments.

It is often stated that a Voluntary Army, such as ours, is much cheaper than a National Army; that militarism is a crushing burden

¹ Washington, Fifth Annual Address, 3rd December, 1793.

and a curse to the nations on the continent. Let us examine that statement. Germany has not only the strongest Army, but also the second strongest, if not the strongest, Navy on the continent. Therefore, we ought to find in Germany unmistakable evidence of the ruinous effect of militarism, especially as her natural resources, such as geographical situation, sea-border, harbours, coal, climate, fruitful soil, etc., are exceedingly poor if compared with the magnificent natural resources of Great Britain. Yet we find that there are in the German Savings Banks £650,000,000, as compared with but £210,000,000 in Great Britain; that the German Savings Banks deposits increased during the last six years by £170,000,000, whilst ours increased by only £17,000,000; that only from 20,000 to 30,000 people emigrate yearly from Germany, whilst between 200,000 and 300,000 emigrate yearly from Great Britain; that in Great Britain the number of unemployed is enormous, whilst Germany has practically none; that the national income of Prussia, subject to income tax, has, between 1892 and 1905, increased by about 75 per cent., whilst it has increased by but 15 per cent. in Great Britain; that apparently Germany is much wealthier than Great Britain. The foregoing figures, which are taken from official statistics, prove that militarism is certainly not a crushing burden to Germany.

Measured by the money actually spent, the British Army is apparently a little cheaper than the German Army, but it is in reality very much more expensive. Great Britain spends on an inefficient and unready Army of a few hundred thousand men, about £30,000,000 per annum, whilst Germany spends on an efficient Army of several million men, £35,000,000 per annum. Per head of population and per tax-payer the British Army is actually more expensive than the German Army. Whilst Great Britain spends about 15 shillings per head per year on the Army, Germany spends only 11 shillings per head per year on her Army. In other words, militarism presses more heavily upon the average British than upon the average German tax-payer, and whilst we receive a very unsatisfactory article, Germany receives an excellent article for the money spent.

It is true that, whilst the British Army withdraws only about 200,000 youths, mostly loafers, from the streets, the German Army withdraws about 600,000 youths from active production. However, the marvellous progress of all the German industries indicates that German production cannot be suffering severely from this withdrawal of 600,000 hands, and I venture to affirm that the German industries are not harmed, but greatly benefitted, by the military training received by every worker. The working capacity, and with the working capacity the earning power, of every man depends, in the first place, upon his health and strength, which are his most valuable possessions, and these are greatly increased by two years of strenuous open-air life, free from all anxiety about the daily bread. The two years, which every German worker devotes to hard and continued bodily exercise, set him up for life. They not only improve his health and increase his strength, but inculcate in him habits of discipline, cleanliness, orderliness, thrift, self-reliance, and mutual helpfulness. The German Army is the largest and the best school in Germany. Knowing the German Army from within, and having a considerable knowledge of German industrial and commercial life, I have no hesitation in asserting that Germany's industrial success is due, in the first place, to universal military training. Whilst the British race

is undoubtedly physically deteriorating, the physique of the German race is equally undoubtedly improving. A comparison of English crowds with German crowds makes it clear to the most supercilious observer that the German race is now by far the sturdier of the two. It is true that, as may be read in old books, Englishmen used to have the finest physique in Europe, but now things have changed. Universal and strenuous bodily training in the one country through three generations, and almost universal bodily neglect in the other country—only an infinitesimal percentage of Englishmen can afford regular bodily exercise in the open air, and long holidays in the country—has wrought this remarkable change.

Lastly, it is an illusion that the British Army is a refuge for the unemployed. Although unemployment is fearfully prevalent in this country, and although almost 300,000 British people expatriate themselves every year through lack of work, the Army cannot obtain a sufficient number of recruits. Apparently only a very small percentage of the unemployed enters the Army, and as those who enter the Army must be able-bodied, most of them ought to be able to find work outside the Army. Besides, the British Army is primarily not a charitable institution but an institution for the defence of the country and the Empire.

I think the foregoing proves that from the point of view of economy and hygiene, from the financial and social points of view, from the points of view of the Chancellor of the Exchequer, the tax-payer and the working-man in shop and factory, universal military service is not a curse but a blessing. An Army is an institution which should give the greatest fighting power and the greatest possible security against foreign attack to the nation at the minimum price. The British Army is an institution which gives an insufficient fighting power and insufficient security to the nation at the maximum price.

Let us now consider

GREAT BRITAIN'S POSITION IN CASE OF WAR WITH A COUNTRY POSSESSING A NATIONAL ARMY.

It is evidently not impossible that the British Army may have to fight a National Army. London is the key to the British Empire. Great Britain's insular security rests, in the first place, upon her naval supremacy, and, in the second place, upon the preservation of the balance of power in Europe. Philip II., Louis XIV., Louis XV., and Napoleon I., tried to make themselves masters of the continent and attacked Great Britain. History may repeat itself. Even if Great Britain be not attacked directly by a nation striving to master the continent, she cannot allow that nation to occupy Belgium and Holland, whence an invasion would be comparatively easy. The Napoleonic Wars may have to be fought over again. What will be Great Britain's position in case of such a war, or of any other war with a State possessed of a National Army?

Great Britain, which, in the time of Napoleon I., was a military Power of the second rank, is now only a military Power of the third rank. Her Army, though immensely costly, stands on a level with those of Switzerland, Belgium, Holland, and Bulgaria. She has but a small number of soldiers, and these are of inferior *morale* and inferior physique if compared with those of her possible antagonists. Great Britain cannot safely pit a small number of boy-soldiers against

an overwhelming number of men, and as Great Britain has practically no reserve of trained soldiers, a single defeat might wipe out the British Army. A State possessing a National Army may risk losing a battle, but Great Britain dare not incur such a risk, and, therefore, she would, in such a war, be compelled still to fight in the pre-revolutionary style and to employ the antiquated and inefficient strategy of Frederick II., which Wellington had to use against his will. If such a war be fought on foreign soil, the British commander would have always to keep within easy reach of his ships. He would be able to operate only in a safe corner far away from the vital spot, as did Wellington. However, he may not be able to repeat Wellington's feats in the Peninsula, as railways and telegraphs have abolished space. Therefore, though he may annoy the enemy at a safe distance, he cannot strike at the seat of power and the centre of national vitality.

Great Britain is not an aggressive Power. She requires an Army only for defence. But let us not forget that the best defence is the attack. The British Army, as at present constituted, is only an Imperial police force, and an instrument for passive defence. It can demonstrate against a National Army, but cannot hit it hard. Therefore, future wars, in which this country may be engaged, should be almost interminable and exceedingly costly, as were most of our past wars. If Japan had had an Army similar in character to our own, if she had been able to land only 100,000 trained soldiers on Asiatic soil, she would have had to fight Russia in far-off corners rather by manœuvring than by battle, and the Russo-Japanese War would probably still be going on.

Opinions are divided as to whether an invasion of Great Britain is possible, but so much is certain that such an operation must be most tempting to foreign strategists who, by risking merely the capture, not the destruction, of a small fraction of the Army may gain an unusually tempting prize. At all events, it seems by no means impossible that Great Britain may earlier or later have to fight for her existence with her Army, and then she may find her weak Army a reed to lean on.

It is true that our Army can be reinforced by 300,000 Volunteers, but I think it would be murder to send them against a well-trained National Army. It is also true that, in case of need, Great Britain might rise like one man, form an enormous National Militia, and fight as heroically as the Americans did. However, I am afraid Great Britain cannot rely on an untrained militia as do the United States. The position of the two countries is totally dissimilar. In the first place Great Britain has not the backwoodsmen and countrymen who were the backbone of the American militia in war, and in the second place she has no continental distances to protect her, and give her time for organising her defence. Besides, according to Moltke, "Wars fought by Militias have the peculiarity that they last much longer, and are for this reason much more costly in money and lives than are other wars."¹ The American War of Secession cost 800,000 lives, whilst the Franco-German War, which was fought by a number of men more than twice larger, cost only 200,000 lives. Therefore the American Civil War was eight times more deadly than was the Franco-German War.

¹ Moltke, Speech, 16th February, 1874.

Lastly, Militias have been very greatly over-valued. Perhaps the greatest Military authority in America has unconditionally condemned their use. On the 24th of September, 1776, Washington wrote to the President of Congress: "Experience, which is the best criterion to work by, so fully, clearly and decisively reprobates the practice of trusting to Militia, that no man who regards order, regularity and economy or his own honour, character or peace of mind will risk them upon this issue. The evils to be apprehended from a standing army are remote, and, situated as we are, not at all to be dreaded; but the consequence of wanting one is certain and inevitable ruin. This contest is not likely to be the work of a day; and to carry on the war systematically you must establish your army upon a permanent footing."¹ Colonel Henderson also is very sceptical as to the value of an insufficiently trained Militia, for he writes: "A mob, however patriotic, carrying small-bore rifles is no more likely to hold its own to-day against well-led regulars than did the mob carrying pikes and flint-locks in the past. Non-professional soldiers are likely to fail in discipline, and it would appear that at the beginning of the campaign they are more liable to panic, less resolute in attack, less enduring under heavy losses and great hardships, and much slower in manœuvre than professionals."²

I think the foregoing proves that from the points of view of the strategist, the statesman, the economist, and the citizen Great Britain requires a National Army. Therefore two questions arise:

1. What kind of National Army does Great Britain require?
2. How can she obtain the required army?

Formerly we were told to copy the German Army, and now we are told to copy the Japanese Army. A National Army is not a dead machine which can be copied, but a living organism. To those who say: "Let us copy the Japanese Army," I would answer: "Give me the Japanese history and I will give you the Japanese Army." Englishmen are neither Germans nor Japanese. A British National Army must before all be National.

Military service of two or three years is probably unnecessary. In the continental barracks an incredible amount of time is wasted on traditional trivialities and unnecessary housemaids' work whilst war training is neglected. Six months' training followed by short manœuvres should suffice to make a soldier. The Prussians who defeated Napoleon I. under Blücher had had only six months' training. Since then weapons and tactics have become much more complicated, but Colonel Pollock has shown that average recruits may be converted into good soldiers in six months. The ideal type of the British Army can be settled only by the careful deliberations of the best military brains, and it seems highly desirable that the Government should appoint a small commission to study this question and to draw up a plan.

Three centuries ago, Sir Edward Cecil, then the greatest English General living, wrote in a memoir on the defence of the British coasts against invasion, "The danger of all is that a people not used to war believeth no enemy dare venture upon them which may make them neglect it the more for that their ignorance doth blinde them." This is unfortunately still the attitude of the British nation. Is a Jena or a Sedan required to wake up the people?

¹ Bancroft, *History of the United States*, Vol. V., 412.

² Colonel Henderson in *Encyclopædia Britannica*, Vol. XXXIII., 747.

³ Dalton, *Edward Cecil*, Vol. II., 402.

Great Britain requires a National Army, or at least a large National Militia, thoroughly trained for war. Every Englishman should possess the necessary training to enable him to defend his country. The public gives little thought to the Army problem because it does not know that a strong British Army is the best guarantee for national and international peace and that universal Military training would be a blessing to the people. Therefore it seems to me that the first step towards obtaining a satisfactory military force for the defence of Great Britain and the Empire should consist in informing the people that a National Army is a necessity for Great Britain. Hence the educational propaganda of Lord Roberts seems to me to be of the very greatest value, and I think that every officer who has the future of the country at heart, and who supports Lord Roberts in his mind should also support him by deeds to the best of his ability.

The CHAIRMAN (Field-Marshal Earl Roberts):—I think I shall be expressing the views of all present when I say we are greatly indebted to Mr. Ellis Barker for his interesting lecture. I much doubt if any more useful and instructive lecture has ever been delivered in this room. It is rare indeed to find anyone able to approach a subject of such vast importance with such a store of historical knowledge as the lecturer. In a rapid survey, Mr. Barker has stretched out to us the military history of all the great nations of which any record exists, and, in spite of the extent of the country through which he has led us, he has, like a skilful guide, so arranged our journey that the prominent features in the landscape have attracted our attention and fixed themselves upon our memory. I have on several occasions expressed the opinion that no subject is more worthy of study by an Imperial people than that of history—history is to nations what experience is to the individual. It explains to them the causes of the origin, the growth, the culmination, and the decay of nations, and just as it is possible for men to profit by the experience of others, so it is possible for nations to emulate the qualities and imitate the actions which have led to honour and safety, and to eschew the vices and the policy which have resulted in the downfall of nations in the past. Mr. Ellis Barker's lecture is of peculiar interest and significance to me, especially if I consider it in connection with the address given by Dr. Emil Reich at the Mansion House a fortnight ago. As you are probably aware, I am endeavouring by all means in my power to persuade our fellow-countrymen of the vital importance of adopting the principle of universal military training, not only to secure the safety of the nation and the Empire, but to improve the moral, physical, and material condition of the people. One of the main difficulties I have met with is based on the mistaken notion that as a maritime Power we can rely almost entirely on the Navy, and do not require, in addition, a sufficient and efficient Army. That fallacy was admirably dealt with by Dr. Reich, when he pointed out that no single nation in the past has secured its safety by relying on an Army or a Navy alone, and I was glad to hear this fallacy repudiated by Lord Lansdowne in the course of the debate in the House of Lords on the 18th inst. Dr. Reich's words are well worth repeating. He said: "It is essential that Great Britain should have great military forces as well as a great Navy, for she must either remain an Empire or cease to be a kingdom." To-day we have heard from Mr. Ellis Barker how National Armies have been raised and organised in the past. Without a single exception we find that where Armies were truly national, they were raised on the principle of personal service to the country—on the principle

so authoritatively affirmed by the Duke of Norfolk's Commission: "That it is the duty of every citizen of military age and sound physique to be trained for the national defence, and to take part in it should emergency arise." Whenever and wherever this principle has been maintained, it has led not only to material safety, but to the maintenance of the national honour and to increased commercial prosperity. But wherever and whenever the sordid craving for material prosperity and for the selfish enjoyments of an over-civilised society have led to the abandonment of personal service and the adoption of service by proxy, there we may see the decay of the national spirit, which has been the invariable prelude to the national downfall. But Mr. Ellis Barker has not contented himself with proving to us, by the impregnable testimony of history, the superiority of National over non-National Armies, and the downfall which has ever followed the conversion of the former into the latter, he has also shown the reasons of the superiority of National Armies. These lie mainly in the number that a nation can place in the field, and in the moral, mental, and physical qualities which a National Army alone can secure. And here, gentlemen, we come to the very heart of the problem, to unravel which the National Service League was formed. It is no mere academic question, no subject for dilettante discussion, but in very truth the most important matter that can engage the attention of the British people at the present time. For on its solution depends, not only the future welfare of the country, physical, material, and industrial, but, as I profoundly believe, its very existence as a kingdom. Gentlemen, our Army at the present moment is most certainly not a National Army; it does not represent, either in numbers, or in physique, or in intelligence, or in *moral*, the high qualities of the British people. This is in no way the fault of the heterogeneous forces which make up our Army. The fault lies with the nation itself. We have heard much recently of the ideal of a Nation in Arms. It is a noble ideal—a true ideal. It is the ideal for which the National Service League has been working for the past five years, and we members of the League welcome the adoption of that ideal by the Secretary of State for War. But a Nation in Arms has no meaning unless it is founded on the nation itself, unless all classes are fully represented in it, and unless all are obliged to take their share in the common burden as the first and most sacred duty of citizenship. This, gentlemen, is the true lesson of Mr. Ellis Barker's admirable address. And in emphasising this true lesson he has subjected the common arguments in favour of the voluntary system of recruitment to an analysis so searching and so destructive that I cannot imagine anyone studying this lecture without being convinced that, in refusing to adopt the just, modern, and democratic system of personal military training for national defence, the country is adhering to methods which are obsolete, to principles that are discredited by history, and by the practice of all modern nations, and to a line of action that can only lead to disaster in the first shock of war with a European Power, and thus to the downfall of this great Empire, which it is our duty to maintain undiminished and untarnished, as we have received it from our forefathers.

[The Chair was then vacated by Lord Roberts, and occupied for the remainder of the meeting by Major-General Sir Thomas Fraser.]

Admiral Sir NATHANIEL BOWDEN-SMITH, K.C.B.:—I have often stated in this place that I, as a sailor, naturally consider the fleet must be our first consideration. I do not mean to say, of course, that it must be our only consideration. I can understand people saying the Navy only should

be thought of if we have to consider merely the group of islands which we inhabit, and the necessity of ensuring the food supply of the people who live on those islands; but if we are to continue in the future to take our proper place in the counsels of Europe, if we are to be in the future a world-wide Empire, as we have been in the past, our fleet alone is not sufficient, and we must have some means of expanding our land forces in times of emergency. I think we might very well take a lesson from the Japanese. They are to us a very interesting nation. They are a people inhabiting a group of islands almost exactly the same size and area as our own, and with a population of about three million more than our own. I would like to ask where they would have been if they had thought of their Navy only, and not considered their land forces at all in the late war with Russia. They would have been entirely out of it. I would like to bring to your notice that, at the present moment, our fleet is organised in a different manner from any organisation that I can remember during the somewhat fifty years that I served in it. I am not complaining of the present organisation—I believe it is perfectly right; I believe it was the proper move to bring home from foreign stations all our non-fighting and useless ships, and to a certain extent to concentrate our vessels, but it is a curious fact that with the exception of six battle-ships in the Mediterranean, all our battle-ships and a great number of our cruisers are now concentrated round our coasts, in the Channel, in fact, or near the Channel. Can we always be sure that we shall be able to keep the fleet in that position? Only the other day, because the fleet on the home station went away for a three days' cruise to Lagos on some manoeuvres, a question was immediately asked in the House of Commons as to what was to defend our coast during that time. Can we always depend on being able to keep these ships round our coast? We are allied with Japan and also with France, a great naval Power, but we cannot be sure that we shall always be in that position, and therefore I do maintain that the fleet alone is not sufficient for the purpose of this Empire. I noticed that some time ago it was said, I think in the House of Commons, that in consequence of our fleet it was impossible, or almost impossible, for a hostile dinghey to land on our shores. I do not know who the author of the statement was; I never could quite make out. It was certainly said by somebody. I wonder if the wise man who made that statement realised that in the Channel and round our coasts we often have fogs and thick weather, that continue sometimes for forty-eight hours, when you cannot see a mile from the ship, and during that time I should say a good many dinghies could land on our shores. Of course, it is a very hazardous operation, as the lecturer pointed out, to land a large body of men on our coasts, but when we come to consider what a great achievement, if successful, that raid would be to the people that made it and what a great disaster it would be for us, it seems to me it would be a very slight loss to one of the big Continental Powers if they lost 10,000, 20,000, or 30,000 men in attempting it. I agree with the lecturer that such a venture might be attempted, and I think myself we ought to be prepared for it. I should like to add further that I think this is a most excellent paper, and that it will be a splendid addition to our JOURNAL. The lecturer has pointed out how, from the very earliest times up to the present, those nations that have given up the idea of self-sacrifice and trusted the defence of their country to paid soldiers and to allies have always come to grief, and I venture to hope, therefore, that the audience will do all in their power to assist our esteemed Chairman, Lord Roberts, in bringing his patriotic efforts to a successful conclusion.

Mr. WILLIAM GRANT :—I rise as a layman to advocate universal service in the Militia. I have lived in a naval and military atmosphere all my life at Portsmouth. I have followed the manœuvres of various Continental Armies in person, and have served in the Volunteers for years in every rank. Mr. Haldane's scheme, I am prepared to admit, is probably as good as circumstances will allow; but he started at the wrong place. You cannot make bricks without straw, and you cannot have a really good Army unless you have a really good material to start with. I think myself that when one European nation adopted universal military service, they rendered it impossible for any other nation, with a due regard to its safety, to neglect that system. It may be said that we have conquered in former years, but it must be remembered that Wellington never had 100,000 men under him on the battle-field, nor ever had to face 100,000 opponents on the battle-field. The reason why universal military service confers such an enormous advantage upon a nation is, as has been pointed out by the lecturer, firstly, because of the numbers, and, secondly, because of the quality of the material. We know our Army is fairly good as it is, but what would it be if your sons and my sons were swept into the ranks, not merely as officers, but as non-commissioned officers and men? Think of the improved physique, the improved *moral*, the pride of birth, the *noblesse oblige*. It would be a totally different thing. Then, again, arms of precision have done away with personal prowess. I can quite appreciate that when people fought with swords, personal prowess was a distinct advantage, but victory now rests with the Army that can put upon the battle-field, well-organised, well-led, well-disciplined, and well-fed, the greatest number of men who can shoot straight. Bullets will kill men, whether they be pressed men or men who have joined under a voluntary system. I joined the Volunteers as a private, and I rose through all the ranks till I became a captain. I served with a smart Line regiment, till the colonel turned me out and said I knew my drill as well as his own officers; and I was the champion shot in my county one year. I only mention these details to show you that I did my best, and the end of it was that I threw up my commission in disgust because I could never get my men any further. To begin with, the material was poor; they were weakly youths, mixed up with middle-aged or elderly men to a large extent, and they thought they knew just as much as I did; and I could therefore never get them beyond a certain point. I do not ask for compulsory service in the Army in the Regulars. You must always have a Regular Army of 150,000 men, because our sons cannot be sent for five years at a stretch to India, but I do ask for compulsory service in the Militia for at least one year. Whether you call it the Militia or a Territorial Army does not matter. It is said the nation would not stand it. Why not? Are we less patriotic than other nations? The fact is, that no Ministry has the pluck to propose it; they are afraid of the vote, and yet I believe the heart of the nation is sound, and that they would back up the Ministry that did propose it. Now, is the burden great? I have talked with a good many Germans, and they tell me it is wonderfully light. It really amounts to this, they tell me: that a young man enters his business in life one year later than he otherwise would. Is that a loss? Is it not rather an advantage? Think of the advantage of compulsory physical drill for the whole nation, compulsory early hours, compulsory cleanliness, compulsory sobriety, compulsory obedience! Would not the nation emerge the better for such a training? Would not it be the best possible set-off to the physical degeneracy that exists in this country? Nor would the Army be then what it is now; the men would

split up into coteries. The more intelligent men would herd together, but the general social calibre of the men would be vastly raised. And what an Army it would be! Foreign Armies are very fine, but I believe our Army in the course of twenty years would be better, for there is in the Englishman that love of sport and athleticism which is not so prominent in foreign nations. The Regular Army would be vastly improved. There would be many a man who would serve his year in the Militia who would say afterwards: "I like this job; I think I shall go on to the Regular Army. I do not want to go back to my father's little country shop in some obscure town, and stay there for the rest of my life; I shall go in for the regular thing." There would thus be no difficulty about recruiting for the Regular Army in future, because all the best of the youth of the nation of that class would fill up the ranks of the Army. It would be capable of immeasurable expansion, and invasion would be impossible. I quite agree that in these days of torpedo-boats, submarine mines, submersible boats, and what not, the Navy, grand as it is, is not the only thing to be relied upon; and if the country be imbecile enough to listen to the idea of a Channel Tunnel the risk would be vastly increased. I think with Lord Wolseley, when he said that the invasion of England is not only possible, but perfectly feasible. I believe that if three German army corps—in other words, about 100,000 men—were once safely landed in this country, with the requisite guns, cavalry, and such things—and such a thing, as has been pointed out by the last speaker, is not an impossibility—they could march from one end of England to the other, and that all the Volunteer forces we have could not stop them. If the system I have outlined were adopted, I believe in twenty years we should have such an Army as the world has never seen. I plead for it. If we love peace let us be prepared for war.

Lieut.-Colonel A. ALSAGER POLLOCK (late Somersetshire Light Infantry):—I did not expect to be called upon so soon in the discussion; but as I have been asked to say a few words I will endeavour to do so. It seems to me that in considering this question of National Armies we are rather inclined to get away from the real point. I fancy that it is of more importance that an Army should be a good Army, a numerous Army, and a well-led Army than whether it has been raised by voluntary or by compulsory enlistment. Looking back into the history of our own Voluntary Army, may we not take a certain amount of confidence from it? Whenever we have had a Government that knew how to make war, which has not been often, our Army has generally succeeded in fighting creditably. The lecturer drew our attention to the *débacle* which overtook the Armies of Xerxes, when they encountered the National Armies of Greece. If my memory serves me right, the Armies that Xerxes led into Greece, although composed, as the lecturer has told us, of a very great number of nations, were, from the lecturer's point of view, National Armies, because they had to serve whether they liked it or not. They were National Armies to that extent, and Xerxes would have wanted to know the reason why if they had not come up. I take it that the Persians were beaten, not because the Greeks were a National Army, but because the latter fought harder, and had generals of greater ability. After all, it has generally been a matter of generals. Take the Persians in 622 A.D. The forces of Choaroes certainly were a National Army, and yet we find Heraclius doing exactly as Von der Goltz tells us will be done in the future. Von der Goltz prophesies the uprising of a new Alexander, who, with a small, well-equipped force of highly-skilled warriors, will dash asunder the hordes of

the armed nations like so many green-banner Armies of China. We talk a great deal about a National Army for this country. It seems to me we must make up our minds that we cannot have it, simply because we have a world-wide Empire. We have been reminded to-day that it is necessary for us to provide over-sea garrisons in time of peace, and that a portion of our Army must therefore be raised by voluntary methods, in order to maintain those garrisons. Consequently, we start with an obligation to spend a certain amount of money upon a Regular Army raised upon a voluntary basis, and therefore we are rather circumscribed when we pass on to the question of a National Army. I believe as much as anybody in this room in the great advantages of what is called national training; but we must not confound that with national defence. All you can do by universal training is to add an inch or two, perhaps, to a boy's chest, possibly teach him to shoot; but what more? That does not make him a soldier. The lecturer alluded to my little experiment of last year. I have tried once before to dissipate the idea that I ever pretended to make finished soldiers in six months. I taught a hundred men a good deal of what the individual soldier requires to know; but it is ridiculous to suppose that because one hundred men, or one hundred thousand men, or one million men have all of them learned their work, that you can rightly call them soldiers unless in times of peace they are properly organised in the units in which they are to proceed to the front when wanted. You may by national training, or any other process you like, train every man and boy in this country so that his drill shall be as good as Frederick's Guards, and his training as good as the Light Division in the Peninsula, but unless you have them, in time of peace, organised in the units in which they are going to fight the enemy, you may as well keep the money in your pockets. Except from the physical point of view, training that does not mean service in a real Army is no use whatever.

Lieut.-Colonel W. UNDERWOOD (late 4th Hussars):—I listened, as I think we all did, with great interest to the synopsis which Mr. Barker gave us of the history of National Armies and their success against non-National Armies. I congratulate him on his lecture, and I hope that he may amplify it some day in book form. If that were done it would be a very valuable contribution to military history. But there is one point on which I disagree with him, and that is, the statement that he made in the beginning and also in the middle of his lecture on the question of the Russians being a non-National Army. He also quoted Kuropatkin's statement, that the cause of the Russians' defeat by the Japanese was that the Russians were a non-National Army. I think from what I have read of the reviews of the book—I have not read the book itself—what Kuropatkin said was that the Russian Army had not the national spirit; the war was not a national one. He did not say the Russian Army was a non-National Army. I consider that, in one respect, the Russians are perhaps more a National Army than any other Army in Europe, and that is in respect of the 500,000 men composing the Cossack Army. A little blue-book has been written by a German officer in the Intelligence Department, which has been translated into English by Captain Napier, of the Intelligence Department of the Indian Army, called "The Cossack Armies," and in that book he shows that the Cossack Army is conducted on the feudal system; that is to say, the Cossacks are farmers, living in communistic farms with their officers, who in time of war command them, and who in times of peace are their magistrates, and that these men turn out at a cost to the Russian Government of the comparatively small sum of about two million pounds per annum to fight for

their country in case of war abroad, as occurred in the Japanese campaign. It has often struck me that such an Army as that might have been very easily obtained by England, which has as large an Empire and possessions as Russia. For instance, suppose that after the Boer War we had taken a large number of our reservists (many of whom were going about the streets of our large towns half starving) and placed them in Canada, on the Canadian Pacific Railway line, or in South Africa in agricultural co-operative farms on the same system which has been carried out by the Russian Government since the year 1693, what a splendid force we might have had at the present time! In the last few lines of his paper Mr. Barker asks whether the people of England will ever wake up, or whether it will require a Jena or a Sedan to make them do so. Sometimes, when I am in a melancholy mood, I am rather afraid it will require a Jena or a Sedan to wake England up to the necessity of a national system of training. That national system of training, as Colonel Pollock said, is quite useless unless we have the men formed in units and properly organised, but I certainly say that if we had that force, which we are never likely to have without compulsory service, it would be quite within the power of any Government or War Office to form them into a properly organised Army. I think Mr. Haldane is trying to tackle that question now with the Volunteers, who are at present not properly organised. But with regard to this question, I feel sometimes, on account of the crass indifference of the great mass of the English people to the noble efforts which Lord Roberts is making in order to introduce universal national training, that we may remain asleep, and live in this fool's paradise, which we are now doing, until we have a war with some country and suffer a Sedan or a Jena. But at another time I take heart, when I look round and recollect the past, when nearly everybody was against universal training. Just twenty-nine years ago I was present at a lecture given by Sir John Ardagh, who is now, I believe, a member of the Universal Service League, not in this building but in the old Institution, on the question of the reorganisation of the Militia, and in that lecture he incidentally said that compulsory training—I think he called it conscription—is contrary to the ideals of the British people, and also beyond our needs. Major Ross, in the Gold Medal Essay of this Institution for 1898, advanced the same view, viz., that we do not want national compulsory service because we should get more men than we require; that for our requirements we only want a small, efficient, highly-trained Army, with sufficient reserves, whereas if we go in for compulsory service we shall only half train more men than we want. My answer to that is, Why is it necessary, if we have compulsory service, to train more men than we want? We should take the pick of the men as they do in other countries. In Germany and France they do not train all the young men; there are a large number of exemptions. In the German Army last year 328,000 were summoned, and only 220,000 were trained; and in the French Army the number was less still. It is not in the least necessary to train all the young men of the country. On the occasion when Sir John Ardagh gave this lecture, Colonel Robertson, a Scotch officer who commanded, I think, the 19th Foot, gave a most excellent speech in favour of compulsory service. He controverted Major Ardagh's views, and said that in his experience while travelling in Germany and conversing with employers of labour, they were generally of opinion that the labourers and artisans in Germany were improved 80 per cent. by the training which they received during their recruit courses; and he added that he thought if our artisans were trained in a similar manner it would be an equivalent to them to the University training which people in a higher class of life get at the Universities of Oxford and Cambridge.

Mr. ELLIS BARKER, in reply, said:—Colonel Pollock said Xerxes led a National Army, and Colonel Underwood spoke of the Russian Army as a National Army. I think that a National Army can only be possessed by a nation, but I do not think Persia was a nation in Xerxes' time. Fifty-six tribes were led against Greece, and the men had to be driven against the Greeks with whips and in chains. The Persians, as you can learn from Herodotus, fought hardly at all. The fighting was done chiefly by the subject races, whilst the Persians simply guarded the Monarch. Russia also can hardly be called a nation, for Russia is not a deliberately formed and consciously united political body, but a chance agglomeration. But I do not deny that National Armies may be defeated, and I do not say they are always invincible. The Swiss Armies, for instance, have been defeated a number of times. My argument is that, as a general rule, a National Army is superior to a non-National one, and it stands to reason that that is so. Psychological reasons which appeal to everyone make that point clear. Colonel Underwood suggested that I ought to expand my lecture into a book. It would be very easy to write a superficial book on the subject of my lecture; but I think a history of war should be thorough. As no history of war exists, such a book ought to be written, but it ought to be written not by a single individual but by a number of officers of every arm. Another book which I think ought to be written is one showing the necessity and advantage of universal military training for Great Britain, and that book also might be written by a number of experts: the financial part by a financial authority, the physical part by an eminent medical man, the strategical part by a strategist of repute, etc. These are two books which I would suggest to this audience, and I hope that one of them, if not both, may be written. Colonel Underwood spoke of the crass indifference of the people to the necessities of the nation as regards defence, and he and other speakers spoke severely about the indifference of the Government. I think the English Government cannot be blamed for its attitude of passivity in this matter, for the English Government is not a Government which governs. The English Government rules, but it does not govern; it is merely an agent which governs on behalf of the nation, and unless the nation gives the Government clear instructions to do this or to do that, the Government cannot act. Therefore, the first step to obtain an adequate Army and universal military training in some form or other for the defence of the country and for the defence of the race—the latter is, to my mind, as important as the former—is to wake up the nation, and if you wish to wake up the nation the best thing you can do is to assist Lord Roberts in his educational campaign. Unless you wake up the nation, and unless the nation compels the Government to bring in a Bill which makes universal military service, or at least some kind of universal military training, compulsory, you cannot get a National Army. You must not wait for the Government to move, but you must move the Government. Therefore, I think every man who has the welfare of this country at heart should become a supporter of Lord Roberts's League, and every military officer who is an expert on military matters, who sees more clearly than do men in other walks of life, how very necessary for this country is an adequate Army, ought to become an agent for Lord Roberts, and make his policy known to his friends. A military officer is supposed to stand above parties, and to set a good example to our statesmen who do not always stand above parties. However, Lord Roberts's policy is not a party policy, but a national policy. It is a policy which every officer may frankly and freely advocate in his circle, and therefore I think that every officer ought to identify himself with Lord Roberts's aims.

THE ARGENTINE REPUBLIC AND ITS NEIGHBOURS.

By Major-General Sir A. B. TULLOCH, K.C.B., C.M.G.

On Tuesday, 13th November, 1906.

General Lord WILLIAM SEYMOUR, K.C.V.O., in the Chair, in the
unavoidable absence of the DUKE OF ARGYLL.

SOUTH AMERICA is to the British public almost an unknown land. An annual stream of tourists go eastwards as far as Japan, and a small but steadily increasing trickle of those who wish to escape from a dreary English winter is setting in to the West India Islands. Unfortunately few care to go further south and cross the line to the great continent of South America, which, amongst other nationalities, contains what is practically one of the richest of English colonies, viz., Argentina, where upwards of £350,000,000 of British capital is invested, a huge country of some million and a quarter square miles, most of which is the most fertile soil in the world, and this with a temperate, pleasant, and very healthy climate. Had it not been for the utter incapacity of an English General, who brought terrible disgrace on the British Army, this splendid country would now be, not only in theory but in actual fact, a portion of the British Empire. Although we were disgracefully beaten when we attempted the capture of Buenos Ayres from the Spaniards in 1806, and the captured Regimental and King's Colours then taken from us may still be seen in the principal church, the tower of which shows what are said to be English cannon shot sticking in it, no people are more respected and highly thought of than the English, of whom there are 20,000 in Argentina, "Palabra de Ingles" on the word of an Englishman being still a well-known Argentine proverb. Even the Municipal Governments are modelled on those of this country, the Buenos Ayres police being dressed like our own Metropolitan force, and right well they do their duty also at the busy street crossings of Buenos Ayres. The turn out of the mounted portion could not be beaten by those of London, and the rigid but polite way in which they keep the streams of carriages in their places at Palermo, the Hyde Park of Buenos Ayres, would satisfy even Scotland Yard.

Having lately returned from a winter trip to Argentina, I think that possibly a few of my observations may be of use to those who may wish to try the West instead of the East, and escape from the cold, damp and darkness of England during the four worst months of the year. To get to Buenos Ayres a voyage of three weeks by Royal Mail from Southampton, or Pacific Steam Navigation Company from Liverpool is necessary, but as the longest sea passage without touching at a port, viz., that across the Atlantic, is only five days, the voyage in a large ocean liner, with everything to make one comfortable, is by no means a weary one.

To English men and women the most interesting port of call is Corunna, the steamer anchoring close to that part of the old fortifications in which is the grave of our national hero, Sir John Moore. The tomb is in an excellent state of preservation, and the surroundings carefully attended to.

To see as much of South America as is possible in a comfortable winter trip to Argentina, it is advisable to break the voyage at Rio de Janeiro. An exploration and sight of the harbour is in itself alone worth the voyage there. Sydney Harbour, in New South Wales, has often been mentioned in comparison, but the two are widely different. Sydney Harbour is beautiful, but that of Rio is grand. The first-named is a long estuary with very picturesque creeks and small bays on each side of it, but Rio Harbour, with its narrow entrance, opens into an immense bay, containing many beautiful islands, the whole enclosed by cloud-tipped mountains, forming a *coup d'oeil*, which once seen can never be forgotten.

The best place to stay at on the city side of the harbour is the International Hotel, some 1,200 feet above the town, and to which there is an electric railway. The road up to it through luxuriant tropical vegetation is in itself worth seeing, and the view from the hotel, and especially that from the top of the mountain, 1,000 feet higher up, is almost beyond description. A cog-wheel railway is continued to the top—Corcovado.

Across the bay, 13 miles, an hour's trip in one of the steam ferry boats, there is the town, or rather settlement, of Petropolis, 2,500 feet up on the mountain side. There being a railway from the landing place at Maua, several of the mercantile community and the chiefs of the different legations have their residences at Petropolis. From the end of November to the beginning of April the climate is simply perfect. Flowers of every description grow in profusion, and in a luxuriance unknown to this country. Roses, camellias, geraniums, in fact all English flowers and many tropical and semi-tropical ones. There are two good hotels at Petropolis, tariff about £1 per day. As several excursions can be made, both by rail and riding from Petropolis, a week can be very pleasantly spent there. The islands and bays of Rio Harbour are also well worth a visit. A steam launch can be hired for the purpose. On no account should an ordinary sailing boat be used; fierce and sudden squalls are rather too common, and have caused many fatal accidents.

The city of Rio is being greatly improved, and when the *praya* or *bund*, running all the way along the sea front, is finished, the drive along its six or seven miles will be grand. A visit to the fine Botanical Gardens should not be missed.

The industries of Rio, except to those who take an interest in the manufacture of textile fabrics, are not particularly inviting. Two days are sufficient for Rio; the town, even in our winter season, is too hot to be pleasant. A seat on the electric trams, which spread out for miles in every level direction, is perhaps as good a way as any of sight seeing. Instead of re-embarking at the same place, it would be advisable to take the night train with its comfortable sleeping cars, a 12 hours' journey on to Sao Paulo, a thriving city of 200,000 inhabitants, and the centre of the coffee district, over 2,000 feet above sea level. The railway between Sao Paulo and the port of Santos (about 3 hours' run) is most interesting. Sao Paulo can boast of one of the finest railway stations in the world, due to the enterprise of the English Sao Paulo Railway Company. The Hotel Sportsman Rotisserie can be recommended.

The Port of Santos is an example of what can be done by proper sanitary regulations. In former days it was one of the most deadly places to live in on account of yellow fever. At times the entire crews of ships in port died; other crews came out to replace them; these also died, and the ships were deserted, and finally drifted on shore. The remains of the wrecks of some are still visible. Now Santos is a particularly healthy port, and yellow fever unknown there. The mail steamers lie alongside the quay, but there is nothing worth going ashore for during their few hours stay at Santos. As passengers by the Royal Mail have the privilege of breaking their journey at Rio, and picking up the next steamer at Santos a fortnight afterwards, the tour sketched out is strongly recommended. On the way down from Santos to Monte Video, 48 hours' steaming, some of us noticed that the air at one time seemed not quite so warm as usual, and were informed that it was usually so there. No special reason could be assigned for it, but the sudden change of temperature may be the cause of the gales, which are not infrequent at that latitude.

Monte Video, the capital of the little republic of Uruguay, at the mouth of the Plate estuary, some 130 miles below Buenos Ayres, is a clean well-kept town, with nothing special in it to see. Uruguay is in climate, soil and products very similar to its great neighbour of Argentina, and had it not been for the miserable Commander-in-Chief of the British Army, which was defeated at Buenos Ayres, Uruguay, then forming part of the Argentine, would also now have been a portion of our Empire. Although the evacuation of Buenos Ayres was all the Spanish General demanded after the defeat of the advanced force in the streets of the town—two regiments of dismounted cavalry, armed with unloaded carbines and muskets, were sent into the streets to attack barricades and barricaded doors with the inhabitants firing down from the flat roofs of the houses, while the main body of the army, under the personal command of General Whitelock, although quite close to the advanced force, which at first had actually defeated the enemy, capturing 30 guns and the arsenal of stores and arms, was not made use of at all—he, the Spanish General, was recommended by a French officer to demand the evacuation of Monte Video also, although the force there was not even threatened. General Whitelock weakly consented. This was one of the charges on which he was tried, found guilty, and cashiered. In 1805 Spain had been forced into an alliance with the French, our enemies.

From Monte Video it takes 12 hours steaming up the shallow muddy estuary to Buenos Ayres docks. I noticed that from the appearance of the ship's wake it seemed as if the keel was stirring up the top of the soft muddy bottom, and that probably a gale down stream might, by lessening the depth of water, put a stop to the traffic.

The docks at Buenos Ayres, into which the steamers all go, are the first tangible proof of the extraordinary wealth and prosperity of Argentina. There are four great docks in line parallel with the sea front opening into each other with channels at each end to the open sea. Two, and in some cases three, lines of steamers lie alongside each side of the docks, which altogether are nearly two miles in length, with great warehouses on the quays fitted with all modern appliances for loading and discharging cargo; but these or the dock administration do not work quick enough, or there would not be such a mass of shipping waiting to load or discharge.

It was satisfactory on walking along the quays afterwards to notice that nearly all the steamers as well as those and the sailing-ships in the river beyond the docks flew the Union Jack.

Driving up from the steamer to the hotel one gets an idea of what a magnificent city Buenos Ayres, with its million of inhabitants, really is, and going out after dinner for a walk down the Calle Florida, in which the hotel was situated, the sight was simply startling. Not only was the street—as are all those except the suburbs—supplied with arc lights on cables across the street, but the shops and shop fronts were also in a blaze with the usual Swan electric lamps, whilst the shops themselves would have done credit to the Rue de Rivoli.

Certain of the main streets, all asphalted, are free from the electric tram lines which form, so to say, a huge network of locomotion over the city and suburbs. Although the railways in Argentina are English owned, and most of the tram lines also, the electric power is the property of a German syndicate. At Rio an American syndicate will soon be in a similar position. One of the best proofs of the mental energy and go which exists in Argentina is that furnished by the newspapers, of which there are two dailies in English and several in Spanish. Seeing a grand-looking building near the hotel, I found it was not, as I supposed, some Government department, but the offices of one of the Spanish newspapers. As a curiosity I brought home an ordinary day's copy of that paper, the *Prensa*. At the first glance I seemed from the size and general appearance to have got by mistake a copy of the *Daily Telegraph*, but it was Spanish. 14 pages, each of 7 columns, most of it in small but beautifully clear type; price equivalent to 2d. English money. The great bank buildings, filled with clerks and streams of customers going in and out, also gave one an idea of the mercantile prosperity of the Republic. The streets were just as crowded as in London, but the men and women are European, quite different to Rio, where there is so much black blood, Brazil, which is Portuguese, having been one of the last parts of the civilised world which adhered to slavery. The climate of Brazil being tropical, doubtless to a great extent necessitated coloured labour. Now, in the healthy districts of that country, Portuguese natives in large numbers are immigrating from Europe, but still even

in the suburbs of such a large seaport as Bahia, north of Rio, the native huts and perfectly naked little negro children running about are at first rather startling.

Argentina until lately, certainly in the towns, may have been said to have been quite Spanish, and shows some very beautiful specimens of that race. Unfortunately, driving or riding is preferred to a more active life, and these dark-eyed beauties do not retain their youthful slim captivating figure as they get on in years.

Of late years great crowds of permanent immigrants from the north of Italy, and broad-shouldered Basques from Spain, and some from France, are pouring into the country. Last year there were 134,000 permanent immigrants; amongst these were 10,000 Russians and 7,000 Syrians. Strong, frugal and hard-working, they will in time produce a particularly fine race of Argentines.

As good a place as any to judge of the inhabitants is to take a seat by the drive at Palermo, the Hyde Park and Rotten Row of Buenos Ayres, and watch the stream of carriages passing. There are many good turn-outs, but several seem to be satisfied with the pair horse public conveyances. There are crowds of well-dressed pedestrians also. Sitting by one of the gates of the Park, I tried to make out the different nationalities. Only once did I notice what was an unquestionable Indian cross in some children, and that must have been a throw back, as the father and mother looked quite Spanish.

The Zoological Gardens adjacent, where is the finest collection of lions I have ever seen, have naturally crowds of children with their nurses. Except that the men and women who went to the Zoological Gardens were from a different social stratum, I did not notice any national difference from those in the walks in Palermo.

The carriages do not return from Palermo to the town until quite late, but as the blaze of electric light in the streets makes them almost as clear as in the day, one is able to appreciate not only the good looks of the ladies, but also their fine dresses and jewellery. Judging by these two last, a married man in Buenos Ayres must also be a rich one.

But the place above all others to get a chance of admiring these dark-eyed Argentine beauties, of whom it may truly be said, see and die, is the Opera House. Unfortunately, or perhaps fortunately, for me it was not open when I was at Buenos Ayres. Not only is the building said to be the third best opera house in the world, but the ladies, their perfect Parisian dresses and jewellery, throw into the shade our Covent Garden, even on a Royalty night.

At some little distance beyond Palermo is the race course, where I had the good fortune one afternoon to see a prize contest in lassoing cattle, between a squad of Texas cowboys and another of Argentine Gauchos. The rapid way in which a galloping steer was pursued, lassoed, thrown, and its legs tied was wonderful. The beast was given a good start, then after it went at full gallop the cowboy or gaucho swinging his lasso. As soon as near enough, the lasso was thrown over the animal's horns or neck and fore-quarters; the horse then bore away to one side and took the strain, the well-trained animal leaning over to the far side, this rolled the steer over on its back or side; then the man was off his horse in an instant, and

with a small rope tied the steer's hind legs together, and it was powerless to move. In one case it took just under 60 seconds from the time the man started to gallop, and the steer's legs were tied. In another the man's lasso missed, and the steer at once went for him and his horse. He had a narrow escape. The man tried again, but the steer got to cover.

There is not much to be done in the ordinary way of sight-seeing, churches and such-like, in Buenos Ayres. But one church did, however, interest me, viz., the one in which are our captured colours. The remains of them are carefully preserved in a glass case high up on the wall—doubtless for safety. The church is full of gigantic silver candlesticks, and seemingly also some jewelled crowns and such-like. Being unfortunately at times in the habit of thinking aloud, I rather startled and horrified my companion, muttering: "Lord, what a place to loot!" The remembrance of days long ago in the East had come over me, and possibly there was something in the air, reminiscences of still more ancient days, when "The Spanish Main" meant so much to our forebears, unscrupulous but worthy descendants of our still more distant Norse ancestors. I heard of a professional museum, where there were said to be two more British captured colours, but as they were stated to be in a case which one could closely inspect, I thought it better not to go, or I might have imitated the midshipman who carried off Nelson's flag from the Cathedral at Tenerife, but which our naval authorities made him return.

To a farmer there are some particularly interesting covered-in stock sale yards in Buenos Ayres, where stallions, bulls, and rams imported from England may be seen; of which animals, even one of the horses or bulls, would be quite a fortune to any small farmer in England. The prices paid for some sent to Buenos Ayres are staggering—up to £3,000 for bulls; but an Argentine-bred short-horn brought at auction £3,500. All animals imported are placed in quarantine for several days and carefully inspected. On the slightest trace of any serious disease appearing, they are at once slaughtered.

Near Buenos Ayres there is one town—I ask its pardon, it is the capital—viz., La Plata, a remarkable instance of how not to do it, and an example to Australia not to try and create an artificial capital. Parliament Houses and departmental buildings have been erected there, costing millions, and a regular town laid out, but the place is practically deserted, and grass grows in the streets. There is a fine park with lofty trees, including what I have not noticed in other parts of Argentina, viz., a fine plantation of oaks. The National Museum, a grand, well-filled building, contains specimens of all the "ologies" required by students.

Having heard so much of this museum and the exceptionally perfect Saurian remains in it, found when excavating for the new docks, I went round the whole of the building, but I was the only individual in it except a few caretakers. One large hall was rather a gruesome place, the glass cases all along one side being filled with quite a crowd of perfect human skeletons. The cases containing skulls of different races were to me, as a craniologist, interesting; but the skeleton crowd, in which I could not see any particular differences, puzzled me. The only conclusion that I could come to was that they were the bony remains of patriotic legislators who had died doing their duty in the great Parliamentary chambers of La Plata.

During the hot summer months great numbers of the wealthy citizens of Buenos Ayres, with their wives and daughters, go to a fashionable seaside place called Mar del Plata, where there are first-class hotels, and where the young people with balls, parties, and such like have, as my American lady friends express it, "a lovely time"; but as the amusements and fun there would be similar to what I have seen in many such places in other parts of the world, I thought I could employ my time better in seeing what to me would be more interesting places.

Before quitting Buenos Ayres it may be as well to mention that there are good enough hotels there. In globe-trotting it is always advisable to go to the best hotel in the place. I did so, and found the rooms and service excellent; but there was room for improvement in the kitchen or catering department. One peculiarity I noticed, that was that *bécassine* (snipe) on the menu were *snipets*, or, as more commonly called, sand pipers. It is possible that true snipe do not exist in Argentina, or at least in the vicinity of the hotels. The cost per day is about 25 shillings (*tout compris*). There are several excellent restaurants and tea-rooms, as in other large cities. On the boulevard of the great main street, the Avenida, the people sitting out in the evening almost make one believe it is Paris, not Buenos Ayres. The saying that Buenos Ayres is the Paris of South America is a very appropriate one. A week is sufficient for Buenos Ayres.

As the language of the Argentine is Spanish, anyone desirous of seeing and knowing something more of the country than can be seen from the windows of a railway carriage should get a small Spanish vocabulary and work at it during the three weeks' voyage. There is certain to be some one on board who will assist the learner with the proper pronunciation and straight tips in idioms.

Another matter, and that is an absolute necessity, viz., letters of introduction to one or more of the leading Englishmen in the Argentine. Not only are the railways, with a small exception, all British owned, but immense districts of the farming land are also the property of the English.

Although Whitelock's defeat lost us the country, some of the British officers, then and subsequently prisoners of war, were so well treated that they eventually settled in the country, and brought their friends out to follow their example. A particularly good class of Englishmen thus became the first foreign settlers in the country, and brought with them high principles of honour and justice. Other lands have been settled by a gold rush, and the wild, reckless, lawless men whom rapidly-got gold attracts. The wealth of the Argentine lay in the soil, certainly; but it was its marvellous richness in the production of grain, cattle, and sheep which was so tempting to the quiet, steady working farmer, and which brought out the right class of men from the United Kingdom, whose descendants are now so looked up to by the other inhabitants of the Republic. Some of these Anglo-Argentines have now been in the country for three generations, and with them the good name and success of their adopted country is their first and great consideration.

With such reliable men as the national advisers, British capital soon began to find its way to Argentina, the Barings taking the lead, and with their help funds were soon forthcoming to construct railways, which are so essential in opening up a new country. British engineers

have now built some 17,000 miles of railway, and British firms at home have supplied engines and rolling stock, and it is British and Anglo-Argentine farm produce which these railways take to the ports for British ships to carry. As already mentioned, between 3,000,000 and 4,000,000 tons of British ships annually arrive at Buenos Ayres alone, to say nothing of those which go to Rosario, Rio Blanca, and La Plata, which to a great extent assists in making food so cheap in the United Kingdom and the Argentine such a wealthy country.

It will startle people in England to know that the area of this marvellous flat farm land, arable and grazing, is upwards of 740,000,000 acres, a little more than half of which is suitable for tillage, even under ordinary existing conditions. The quantity of farm stock, in round numbers, is as follows:—Sheep, 75,000,000; cattle, 22,000,000; horses, 4,000,000; goats, 2,000,000; swine, 600,000; mules, 400,000. The staple farm produce is beef, mutton, butter, cheese, wool, hides, tallow, hair, wheat, maize, linseed, and alfalfa (lucerne). The country being so flat, railways can be constructed at little cost; farm produce is thereby easily and cheaply sent to the sea ports. Last year the total exports, almost entirely farm produce, were upwards of £64,000,000; the imports, machinery, hardware, textile fabrics, and such like, £40,000,000.

England has no idea how much it is dependent on Argentina for its fresh meat, which sent last year 2,620,231 cwt. of chilled beef, of the value of £3,812,376, and 1,576,918 cwt. of frozen mutton, of the value of £2,567,322; total, £6,379,698. As a comparison, it may be mentioned that the value of meat from Australia was:—Beef, £239,740; mutton, £4,152,761; total, £4,392,501. Even the United States send less fresh meat to England than the Argentine. In a paper like this it is advisable to give only such statistics as are absolutely necessary; a short description of the country may, however, be useful. It is taken from the *Buenos Ayres Herald*:—

"The territory of the Argentine Republic extends from within the tropics to the fifty-fifth degree of south latitude—a distance of more than 2,000 miles as the bird flies. One-third of the area of the country is adapted to tillage, one-third to grazing, and one-third is barren mountains, forests, swamps, and arid land which must be irrigated before crops can be grown. The arable district lies chiefly between the thirtieth and the fortieth parallels east of the sixty-fifth meridian. This rather limited area constitutes the grain zone of the Republic, a district which is capable of supporting many millions of people, and growing, it is said, 50,000,000 tons of wheat. The total population of Argentina at present is only five millions, of which but two millions are engaged in agriculture. Last year there were 14,000,000 acres of wheat and 6,000,000 acres of maize. One firm alone at Buenos Ayres exported 1,000,000 tons of grain in 1904.

"The chief nations buying the farm products of Argentina are the United Kingdom, Germany, France, and Belgium. The United Kingdom takes the principal part of the meat, butter, wheat, and linseed. France, Germany, and Belgium take most of the wool, in the proportion of three, two, and one respectively, besides liberal quantities of wheat, maize, and linseed. Brazil takes many tons of wheat and flour, Italy a great deal of maize, Holland much linseed, and the United States large numbers of hides, and recently a considerable quantity of wool. Of the total exports of farm produce to all

countries, about one-third are animals in one form or another, and two-thirds are grain."

In the north, the tropical and but little known forest portion of Argentina, there was once a very flourishing little nation of real Christian Indians. This forest district, now known as Misiones, was taken in hand by the Jesuit Missionaries in the 16th century, and reached a high state of civilisation and peaceful pursuits, particularly in horticulture. The Jesuits in protecting their protégés from the exactions and cruelties of the Spanish Governors, and also because they were supposed to have accumulated large stores of gold, were ruthlessly persecuted, and their peaceful converts murderously exterminated by the orders of that most Christian Majesty the King of Spain more than a century ago. Tens of thousands of Indian converts, peaceably settled about the Missions, were ruthlessly swept away, and their villages and farms destroyed. Great improvements and new discoveries were said to have been made by the priests. Only one of these still remains, now known under the form of quinine, one of the most potent blessings ever conferred on those who have to live in the tropics. The original name in its crude state was Jesuits' bark.

When Argentina becomes more populous and the Misiones district is opened up, it will doubtless be a province worth having.

In the far south, below the Rio Negro, where the climate and country may almost be described as Caledonian, the province of Santa Cruz is partially occupied by the overflow of Scotch shepherds from the Falkland Islands. There was there at one time, and possibly some remain, the Welsh colony in Patagonia, as the country was then designated, but these colonists were too conservative, and, in plain English, declined to come under the Argentine Government. If the small Boer trek from South Africa who have lately emigrated there try to follow the Welsh example, they also will have to go. The climate being similar to the north of Scotland, Santa Cruz, with all its latent wealth, would seem to be a good place for the overflow of Crofters in the Western Islands of the Highlands, who are struggling for an existence on a few barren acres, and in their desperation taking land which does not belong to them.

In the hilly and mountainous land of the south, it is safe to predict that payable minerals will be found. Even now a company has been formed for gold mining in Tierra del Fuego.

To return, however, to the foundation of Argentine prosperity, viz., farming. A visit to an *estancia* is particularly interesting. These *estancias*, or stations, as they would be called in Australia, are pleasant, rambling country houses, with the usual stables, out-buildings, and kitchen gardens, lawn tennis green, and shrubberies. The headquarters of the older *estancias* have fine plantations round them, usually gum trees, but pine and deciduous timber are often met with. Coal being dear in Argentina, wood is almost a necessity for fuel, and in the winter for heating purposes; even the railway engines up country use a hard red wood called quebracho. The extent of an *estancia* in the Republic rather startles a stranger. Land there is not counted by acres, but by square miles, and flocks and herds by the thousand. With such a vast amount of stock, to say nothing of grain, wool, etc., to attend to, the owner of an *estancia* is really the head of a great meat and grain-producing factory, and requires an office with clerks and books

as in a business concern in England. When the land was obtained years ago, and price was very moderate, it is easy to understand, now that farm produce is so valuable, that many of the then Argentine farmers may be designated not merchants but farm princes. No farmer in the old country can show better bred stock, and with such a climate and soil in favour of those in Argentina, it is not surprising that land-owners in England found their farm rents dropping as the means of transporting cheap meat and grain to England improved. There are no hedges on Argentine farms; the different fields, if such they may be named, are separated by wire fences. When ploughing is required, one would have expected to see steam ploughs on such flat land; but oxen, horses and their food are all so cheap, that probably animals pay better than steam. Until lately the American plough was principally used, a cheap and rather rattle-trap piece of machinery, which is now giving place to the New Zealand three-share plough, a particularly beautiful and powerful specimen of an agricultural implement. It is strange that Argentine farmers should ever have had to buy ploughs made in America; it does not speak well for the enterprise of our British agricultural machine makers. And now New Zealand, and even Australia, is cutting them out, one firm in Buenos Ayres having lately received an order for 2,000 reaper and binder machines made in Australia.

The great farm country-made wagons are constructed on entirely different principles to those at home, one pair of wheels only being used but they are 10 feet in diameter. As there are no metalled roads in the country—at least I saw none—these high wheels are doubtless the best form to have. The farm labourers required live in detached collections of small houses; they contain many nationalities, the blacksmith of one *estancia* visited being a Russian, the wages for some 10 hours' work per day being equal to about 2s. 6d. English money and rations. Up to 60 years ago, men for harvest work used to swarm over from Ireland to England and Scotland. Now similar swarms, but in thousands, come over from Italy and Spain, principally the former, to gather in the crops of Argentina, returning to Europe with their savings when the harvest is over.

As regards the cattle, short-horns seem to be the favourites. The bulls are all turned out with the cows, and seem to live peaceably together. With the horses, each stallion takes his 20 mares or so, and guards them as jealously as a Turk his harem, rounding them up in a regular herd, and expressing his ideas in very plain terms about any mare which, in grazing, wanders off, in his opinion, too far.

With sheep, the small fine wool Spanish merinos have now given place to heavier English sheep, with rather coarser but splendid wool. I turned over and measured that of one of a consignment of rams just received from New Zealand. It was 10 inches in length, of a beautiful fine gold colour. A plan of securing twin lambs, as stated in a farmer's letter in the *Buenos Ayres Herald*, is said to be successful. A patched common ram is allowed to run with the ewes and mark those in season. These are then turned in for one night with a selected ram, and the next night with a different one.

The only animal which I did not think was properly appreciated in the Argentina was the pig. Having, when farming in a small way, been very successful with my pigs—I crossed prize black Berkshire with selected middle white Yorkshire—I venture to prophesy

that a respectable fortune could be made in pork in the Argentine. The feed, maize cobs, is there, and also that wonderful alfalfa (lucerne). As butter-making there is now advancing with leaps and bounds, one factory just started making over two tons a week, the skim and butter milk might be worked in with the other pig feed. With pork, hams, bacon, etc., at present prices in England, there is unquestionably a good opening for pig breeding in the Argentine. Possibly the New Zealand farmers coming over from that country may try it. Land in Argentina can, of course, be bought; but naturally at a very much higher price than formerly. Far back from railways it is still said to be reasonable in price. When a man with capital buys a new block he usually lets it out in a few hundred-acre lots on five-year leases for a small sum to a small farmer class known as *chacrero*, on condition that they will break it up and sow grain. When the land has been got into order, to the mutual benefit of both, the owner then at the end of the five years sows it with alfalfa. The number of sheep which can be raised on alfalfa continuously, simply shifting them from field to field before they have cropped it too far down, is said to be six per acre easily. There are large patches of alkaline lands in the dry districts towards the Andes. It has lately been found that if the ground is not beyond a certain strength of salt, the Australian salt bush will grow on it and fatten stock well. There is said to be great room for improvement in sheep breeding in Argentina, and for increased export in foreign mutton; that of lamb has not even been attempted. The New Zealanders, who, in increasing numbers, are coming to Argentina, see this, and have already turned their home experience to account.

The grain crops of every kind are wonderful. The straw I picked up in an oat field was as stout as my little finger. Nothing is taken off the land but grain and meat, and up to the present manuring is not required. After a visit to an Argentine *estancia*, seeing what is done and what can be done, one's only feeling is that life is too short, and that if one could but turn the age clock back, then farming in Argentina for a man who knows what he is about and has sufficient capital would be a grand existence.

The great *estancias* in the country are all much on the same lines. I was also fortunate enough to see near Buenos Ayres a horse and cattle breeding one, the best specimens of stallions and bulls being kept until ready for sale. There were some fine hackney and farm sires; but I admired two of the bulls more than any I had seen elsewhere.

Having got an idea of what the farm industry of Argentina was like, I decided to cross the Andes and have a look at Chili; but as bad luck would have it, news came the day before I proposed starting that there was a great landslip on the narrow-gauge mountain railway, so I had to give up the proposed journey until the railway was repaired. This gave me a chance of seeing what the Royal Mail Guide Book recommends, viz., Cordoba. The railway journey to that town, over the great flat sea-like level of the pampas, was not particularly interesting, except in seeing the immense herds of cattle and flocks of sheep, with mobs of horses, which covered the country. Maize was the principal grain crop. The great thistle patches rather astonished me, but I was informed that one description of them was useful for cattle food; possibly the mules might fancy them. With reference to these, I saw some fine donkey stallions in the Buenos

Ayres show-yards—an importation from the north of Spain or south of France.

At Cordoba I found a very fair hotel with moderate prices, house rent, taxes, and *octroi* duties being doubtless so much less than in Buenos Ayres. The town of Corboda would, in American language, be described as a rather one-horse place. It is simply a small country town with some fair shops, but nobody apparently buying anything in them. The small cathedral, of which so much is made in the guide book, is certainly not much to look at. The main portion of it was, however, interesting to me, being built of material I had never before seen, namely, rough boulders, from the size of a man's head to that of a body, stuck anyhow, like plums in a pudding into some very hard Roman-like cement. The inside of the cathedral was, as regards great silver candlesticks, etc., much the same as the one I had seen at Buenos Ayres; but although the hour for daily service, there was only one man in it, kneeling behind a pillar, where he doubtless could not be seen by the solitary priest sitting silently all alone in his robes near the altar. In the other large church I visited at the same time there was no one. Religious observances do not seem to be much considered in Argentina. On one occasion a train I was in had some trouble from a heated axle. "That is because we have a priest with us," said one Argentine.

The beautiful gardens mentioned in the guide book I somehow could not find, and have some doubts as to their existence. So next morning set off by train for the Sierra de Cordoba; then I did have a treat. In a few miles from Cordoba we began to get into the hills, and then soon were in as pretty a mountain gorge as one could wish for, with a fine large trout stream, along the side of which went the railway, gradually rising as we got into the mountain country, the hill sides being covered with small timber. Only in the Highlands of Scotland could similar scenery be found. The gorge extends for several miles, the railway keeping to it until suddenly it ceases, and the train is running along the side of a mountain lake about two miles in length and one in breadth. To a certain extent this size must be kept up by a masonry embankment at its lower end close to the railway, where there are electric power works. Away on the left, and at the far end of the lake, the country is open, but on the right is close to the range of the Sierra de Cordoba, some 3,000 feet in height. Looking at the cloud and mist-swept sides of the wooded, rugged, irregular hills and the undulating park-like land between the Sierra and the railway, with most picturesque tree patches on it, and the winding trout stream, it was difficult to believe that one was in South America and not the Scottish Highlands.

On the way up we passed a small station, St. Catarina, where there are a few houses and a pretty little hotel. Would that I had stopped there, but the Royal Mail Guide Book recommends a place, Coskine, where it is stated there are hotels, restaurants, etc. All these I found existed in imagination only. There is a railway tavern where I got something to eat, and had to remain five hours waiting for the return of the train, which had gone to the end of that portion of the line, and where at Capo de Monte, I afterwards heard, there was a very good little hotel, where I might have stayed and enjoyed a few days' mountain excursions until the road over the Andes was repaired. There was nothing for it but to return to Buenos Ayres,

and it was in that interval I found time to go to La Plata, and do Buenos Ayres thoroughly, inspecting the great wool stores at Barracas, the docks, grain stores, and such like. Go to the great slaughter and meat-chilling and freezing factories I could not. The mere sight of a mass of several hundreds of sheep penned up ready to be killed, with the horrible scavenger birds of prey dotted about the ground near, and the long rows of sheep skins of lately slain animals hung on railings was too much for me.

One special relief when I passed the slaughter houses was to think of the pasture lands where the poor beasts came from, imagining myself there; and instinctively my mind went back to the Highland-like scenery of the Sierra de Cordoba. I could not quite understand why there were not some pretty country residences there, where the hard-worked men from Rosario, Santa Fé, and even Buenos Ayres, could go from Friday to Monday. A sleeping car night mail could easily be arranged. As for colleges and schools, the beautiful undulating land between the hills and the trout stream is made for them. I cannot easily forget the unhappiness of a boy getting into the train at Santa Catarina, evidently going back to school at Buenos Ayres or some other town. Although his friends did all they could to comfort him, the poor little fellow at last quite broke down as the train left the station.

There was one interesting excursion which I might have made from Buenos Ayres had I known about it in time, and that was to the Entre Rios country on the opposite side of the Plate estuary from Buenos Ayres. A guide book is published by the Entre Rios Railway Company showing how to get to the wonderful Falls of Iguazu, in the Misiones province, a total of 1,500 miles north from Buenos Ayres. The railway journey to Corrientes, 500 miles beyond Buenos Ayres, is easy enough, but the rest of the way in a small steamer up the shallow, winding Parana, mostly through dense forest, with the usual oppressive damp, tropical atmosphere, which, with the mosquitoes at night, when the steamer has to anchor, is anything but pleasant. The trip is not recommended, although the immense Falls (1 mile broad and 200 feet high) are grand. The journey there and back can be done in 12 days; but *le jeu ne vaut pas la chandelle*. The Misiones province, with its 800 square miles of forest timber, is a valuable asset for Argentina, and in the cold season (our summer), when the river travelling may be pleasanter, a visit to the Falls will doubtless be one of the regular excursions for tourists. But as regards the Entre Rios country, which is well worth seeing at any season, a steamer leaves Buenos Ayres four times a week, crossing to the port of Concepcion on the Uruguay, where there is a well-managed railway to Concordia, 60 miles. This goes on to Corrientes, as the East Argentina line, over 300 miles further through the province of that name, which lies between the Entre Rios province on the south and the Misiones province on the north. There is said to be a fairly good hotel at Concordia, and from there is the Entre Rios railway to Parana, just opposite Santa Fé, and so back to Buenos Ayres. This trip can be done in three or four days. The Entre Rios country is undulating and park-like, quite different to that of the great flat pampas. It was in this province, just south of Concordia, that the late Baron Hirsch acquired 200 square miles of land and established the Jewish colony of Santa Clara. It was not a success, but some of the Jewish families remained, and are said to be doing

well with butter factories. The land bought by the Baron is said to be now in value twice what he gave for it.

Returning from Cordoba, I came by Rosario, the great river port for the shipment of grain; it is said that Rosario will be the Chicago of Argentina. There is nothing specially remarkable in the flat, rectangular laid-out town; the interest is in the river, which there has such hard, high banks, with deep water, that the grain ships come, so to say, alongside the shore, and are loaded by means of grain shoots. Masonry quays are now under construction; these are said by some to be unnecessary, and that the port charges which will consequently be required will be greatly to the disadvantage of Rosario; but the new works, if not for the benefit of Rosario, will, it is said, be to the advantage of those who make them.

Having received intimation that the road over the Andes was now clear, and that the journey from Buenos Ayres to Valparaiso could be done in 62 hours, I took my ticket, in the first instance, to the small hotel near the summit, where is the frontier line between Argentina and Chili. The Pacific train, with its sleeping carriages, was comfortable enough, and the meals supplied good and moderate in price. There having been a good deal of rain for a day or two previously, we were not troubled with dust, which makes train journeys across the pampas so uncomfortable. As a precaution for such, however, the great majority of the passengers had provided themselves with long linen or silk loose overcoats.

Crossing the 650 miles of the pampas, like crossing the northern prairies, was monotonous. The horizon line was as continuous and never-varying as if one had been at sea; but the Argentine pampas are different from the prairies in that they are covered with great herds of cattle or flocks of sheep and horses. I only saw one animal of the deer tribe. There were ducks on some swampy land we happened to pass, but I saw nothing else in the game line.

About 20 hours after starting, and just at daybreak, I caught sight of the great white line of the Andes, and then, as the light increased, I had indeed a treat, and when the sun, as yet below the horizon, touched the far distant snow peaks, then the pink and rose colours were really worth the 650-mile journey across the great flat land of Argentina. Two of the peaks I saw were said to be over 16,000 feet in height. Soon afterwards the dry, arid, treeless lower spurs of the Andes came in sight. The western slopes are stated to be well wooded, the rainfall from the sea being intercepted by the great mountain range and the water sent down that side.

Nearing Mendoza, the terminal station, we went through some hundreds, possibly thousands, of acres of irrigated vineyards, the melted snow of the high range coming down in many streams, which unite far back and form a respectable river by Mendoza. The long rows of vines, some six feet apart, have an irrigation trench between. The regularity and precision and smart look of these great vineyards was particularly striking.

At Mendoza we changed into the narrow gauge for the first part of the ascent, and got our morning coffee, when to our horror we were informed that there had been a great wash-out during the night high up the line from a torrent of melted snow water (there had been an unprecedented fall of snow in the winter). The message which came down was that the line was seriously damaged, and that it might be some days before it could be repaired. As I had booked my

passage by the next mail to England, I was unable to risk losing it, so had to return by the night train. The hotel I stayed at for the day was in the great square, and a very comfortable one, everything on the ground floor, with a fine open *patio* in the centre, with a fountain and flower-beds. The whole arrangement of the buildings at once struck me as being almost identical with the ruined remains at Pompeii, although on a larger scale; doubtless the reason for such was the same in both instances, viz., possible earthquakes, the whole of the old town of Mendoza having been destroyed with a great loss of life some 60 years ago. I visited the ruins still left; huge masses of masonry, evidently part of some ecclesiastical building. I noted a grand specimen of red pine growing close to about 70 or 80 feet high, and 15 feet in circumference, probably planted by the Jesuit missionaries. This tree alone showed what might be done in the forestry line in the Mendoza country.

A strange tale of the earthquake was related to me. A man outside the then existing hotel was looking in at the billiard room, where there was a party playing. Suddenly the earth opened, and billiard room and all in it disappeared. The man was one of the few who escaped alive from Mendoza.

Having spare time, I visited a great wine-making establishment, where everything was done on the most modern principles. Machinery takes the place of hand and feet manipulation of the grapes. The rows of great wine tuns, 10 feet in diameter, were a curious sight. The annual production of wine amounted to 22,000,000 litres. The business was of such magnitude that there was a branch line from the railway into it. The last year's wine, rather burgundy in taste, was good, but some 10 years old was really excellent; the price, I understood, was about thirty shillings a dozen.

Returning to Buenos Ayres, I had the privilege of being made an honorary member of the Strangers' Club, and also the Jockey Club, quite a palatial establishment. Our objectionable betting system and the shrieking "bookie" are, as in Japan, prohibited, only the *pari mutuel* being allowed. I understood that a certain percentage of that system has to be given towards the support of the magnificent Jockey Club. As for the private hospitality of my friends on the *estancias* and in Buenos Ayres, that can never be forgotten; it was kindness itself.

Something must now be said about the people of the country and the system of Government. In the first place, I may state that all the time I was in Argentina I never saw a drunken man, and only some half-dozen beggars, besides the cripples who frequent the Boulevards of the Avenida. There is doubtless poverty and crime in the low quarters of the town, especially that near the river shipping, but elsewhere everyone seemed very well off. I was told that the labouring class spend their money freely on dress and making themselves comfortable, and also to a very great extent in State lottery gambling. Far back in the west, towards the Andes, where the population is scanty, there is said to be a good deal of serious crime, cattle stealing being prevalent, there being well-known markets for the disposal of such easily-obtained animals.

The Government of the Republic is nominally exactly like that of the United States, with a President, Senate, and Congress, the members being well paid; but, unlike the States, where everyone records his vote, not more than 3 per cent. do so in Argentina. The

Congress and Senate are said to arrange to elect themselves or their special friends. As a rule they are men of means, and not mere professional politicians. Such a system may not be perfect, but it answers well enough in Argentina. It produces a strong Government, which does not stand any Socialistic strike nonsense. If such were apprehended at, for instance, harvest time, when an extensive one would ruin the whole year's export trade, a state of siege is proclaimed; that means suspension of what would be our Habeas Corpus Act. The Socialist strike leaders—importations from Europe—are seized and sent to a penal settlement at Tierra del Fuego, from which the return of some is said to be very doubtful.

A few notes about Chile may be useful, but as I failed to get there, these are from information received. The total cost of the journey from Buenos Ayres to Valparaiso is about £15. With the exception of about four hours over the highest part of the road, where mules are employed, all the rest of the way is done in comfortable railway carriages. One night has to be passed in a small hotel near the summit. The highest point reached is about 13,000 feet. The rarefied air there occasionally troubles elderly people, and with some causes bleeding at the ears, but that is said to be very exceptional. A tunnel is being slowly constructed under that portion of the summit where mules are now used; but owing to the liability of wash-outs from rapidly melting snow after a hard winter, the rest of the railway will always be liable to interruption. In some years this seldom occurs, but the heavy falls of snow last season were the cause of several breaks this summer.

At Santiago there is a fair hotel, the Oddo. A couple of days are sufficient to see that picturesque old city and enjoy the distant views of the Andes. The modern commercial city of Valparaiso is not recommended as a resting place, but at about five miles from it at the seaside there is a good hotel, at Viña del Mar, to which is an electric tramway to Valparaiso. I asked a friend who knew Chile well if I should burden myself carrying a revolver. The answer was: "Certainly," and that wandering about alone as I did, it was really a prudent precaution. I was also cautioned that the roughs were particularly handy with the hanger-shaped knife they all carry. The middle of the street when walking home after dark is advisable. Robberies, such as snatching a lady's chain from her neck in broad daylight, are not uncommon. A practical illustration of the state of affairs and inefficiency of the law and the police is that burglary even of the foreign political chiefs' houses is not unknown. The outbreak at Santiago last September, when the troops were away at manœuvres, shows the unfortunate condition of the country. The roughs there deemed it a fine opportunity to do a little plundering; fortunately the property owners were better armed than the mob. The newspapers stated that only 20 altogether were killed in the street fighting which took place, but those who knew the real state of affairs say that there were over ten times that number. A further lawless outbreak in the port of Antofagasta has twice occurred, necessitating stern repression by military, sailors, and armed citizens. To all old friends of Chile, of whom the English are the warmest, this extraordinary alteration in the state of what was looked on as a model Republic, seems inexplicable, but the great accession of public money from the nitrate fields taken from Peru is stated to be the cause, the export duty alone on nitrate bringing in over £4,000,000

annually to the public treasury. This is in addition to the ordinary revenue from trade importation. With so much money available, certain professional politicians in power have become demoralised; there is a general scramble for all they can get; the public service is neglected; even the streets in Valparaiso having great holes in them. It is to be hoped that the coming Presidential election will result in the elevation to power of a strong man like Porfirio Diaz, of Mexico, otherwise a recurrence of the outbreaks above mentioned seems probable.

Peru, on the contrary, which was defeated, is said to be rapidly recovering, and has now a gold standard. The sooner a globe-trotting visitor gets away from Valparaiso and goes south to visit the great lakes and mountain country east of Port Monte ("the Switzerland of South America," as described in Sir Thomas Holditch's fascinating book, "The Countries of the King's Award") the better.

The railway from Valparaiso, on the west side of the Andes, has been made as far south as Valdivia, and will soon be open for passenger traffic to that place, now an industrious German settlement. There is a good hotel at Valdivia. From that town to the port of Corral at the mouth of the estuary is about three hours' steaming. There is a small hotel at Corral, and from Corral to Port Monte is about 24 hours' steaming, mostly through picturesque sea fiords. There are direct weekly local trade Pacific mail-boats from Valparaiso in five days to Port Monte. At Port Monte are two small hotels; fair, but rough, lodgings are said to be obtainable. From Port Monte to Lake Hanquehue (21 miles) there is a good driving corduroy road. At Puerto Saras, on the lake, there is a little hotel, and from there is a small steamer across the lake to Puerto Atay. It starts at 9 a.m. and gets to its destination about 4 p.m. Excursions to explore and see the beautiful country can be made from both places mentioned by boat or riding. There is some wild fowl shooting to be got on the lakes. Like the Western Highlands of Scotland and the lake district of England, the country mentioned has a heavy rainfall except in January and February.

From the Chilian lakes there is a rough track across a low pass in the Andes to an Argentine lake of great beauty and extent, Nuel Huapi. From there the river Lamay is usually navigable for small steamers to the rising settlement of Neuken, from whence there is the great southern railway to Bahia Blanca.

Riding horses and pack animals are required to get across the Andes by the way mentioned, which would be too rough work for ladies but an interesting trip for men.

From Port Monte the easiest way to Buenos Ayres is to go south through the Straits of Magellan. In our winter (the southern summer) the temperature is pleasant enough, and the mountain coast scenery at the western end grand in the extreme.

In the steamer guide books, a voyage up the west coast of South America and home by the West Indies is recommended; but everyone who knows that route says decidedly: "Don't try it." The voyage from Valparaiso to Panama takes three weeks, and as Valparaiso has to feed all the coast ports for four or five days up, the steamer carries hundreds of cattle between decks, and the after part of the ship is a regular market garden of vegetable produce, and, as well can be imagined, the passengers are not of the same class as those on the east coast route. Full details with reference to this route are given in

"Trade and Travel in South America." If a sea passage is considered better than returning back across the Andes, then it ought to be south, *vid* Magellan Straits. From Valparaiso to Buenos Ayres, the whole voyage by Pacific Steam Navigation Company takes nine days.

Although the lecture is one from a peaceful traveller's point of view, a few remarks about the defence forces of Argentina and its neighbours may not be out of place.

The difficulty with Chile about the boundary line along the Andes, happily settled by the friendly arbitration of our King, doubtless caused the Argentine Government to consider their military position and defence forces generally, and last year a well-considered scheme became the law of the land.

Every male, physically and mentally fit, is liable for military service up to 45 years of age. These are divided into: The Army of the Line, about 13,000 strong, and its Reserve. Service in the standing Army is for one year, or three months, according to lot, but those who come out for three months only have to show in severe examinations that they are thoroughly qualified as riflemen, and are well educated. The Reserve, which will be 150,000, is to consist of men between 20 and 30 years of age.

The Reserve have to serve two periods of one month each, and attend once a year a musketry course.

Behind the Reserve there is the National Guard, *viz.*, men between 30 and 40 years of age. Then there is the Territorial Guard, *viz.*, men between 40 and 45 years of age.

In order that every Argentine man may do his duty to his country, and contribute to its protection in person or purse, every one exempt from service pays a military tax from the age of 20 to 45.

The three months' well educated young men may present themselves before they have completed their nineteenth year; but if, after three months' service, they fail in their examination as to military efficiency, they are obliged to serve their full time. To assist these three months' men in acquiring a certain amount of efficiency before they join, a decree has been issued rendering musketry instruction obligatory in the secondary schools.

To encourage proficiency in rifle shooting, the congress annually allots in the war budget a subsidy for the construction of rifle ranges, issues ammunition gratuitously, and supplies also musketry instructors.

When the present military system is in full working order, it is anticipated that the Argentine Republic will have a fairly well trained Army of half-a-million.

It may be here noticed that the rifle societies of Argentina are not rifle clubs and nothing more. It is there fully recognised, as in all countries except England, that being a good target shot is only one rung in the ladder of military efficiency, and that the most successful man at Bisley may really be worthless as a military unit for the defence of his country. Given any ordinary young man, with good eyesight and a proper instructor, the young man can be taught to shoot well in 30 days; but it takes many 30 days to teach drill and discipline, without which shooting is practically of little value from a military point of view. In this country, if a man has not been well drilled as a school boy, or is, at least, an efficient Volunteer by the time he arrives at 25 years of age, then he ought not to be

allowed to belong to a rifle club, otherwise time and public money will be simply wasted on what is, to such an individual, a mere amusement or preparation for pot hunting.

The Argentine Navy consists of five armoured and three second-class cruisers, with several smaller vessels. Unfortunately the Argentine naval budget, as with us, has to keep pace with possible enemies, and a large expenditure in modern battle-ships is under consideration.

The naval and military forces of those South American Republics which specially interest the Argentine, are Chile and Brazil. The former has shown what they can do as a fighting race, both on sea and land, and we may well be proud that the Chilians were known as the English of the Pacific.

Chile, of which the population, of Spanish descent, numbers 3,000,000, has a permanent military force of 5,000. The law as to every man being liable for service between 18 and 45, is much the same as in the Argentine, but whether the Government is strong enough, as in the Argentine Republic, to have the law enforced, is another matter. The Chilian Navy consists of two belted, heavily armed, and very fast cruisers, and four fast protected cruisers.

Brazil, with its population of 17,000,000, of which about 6,000,000 are white, occupies a position which must require increasing special consideration by the Argentines. Brazil is gradually but systematically being brought under German influence. It must not be overlooked that there are already 350,000 Germans by birth or descent in the fine healthy uplands of the province of Rio do Sul. Although Brazilian subjects, they are Germans to the core, and show they have the same steady perseverance and energy as in other parts of the world. The German Colony, as it is already designated, is being largely augmented by a steady stream of immigrants from the parent country.

The Brazilian Army is nominally about 28,000 strong, but is at least 10,000 short of that number. The Gendarmerie are about the same strength as the Army. The Navy consists of one small battle-ship, two protected cruisers, and two heavily armed small coast-defence ships. There is now under consideration a scheme for having a modern fleet of three first-class battle-ships, three armoured cruisers, three protected cruisers, and a number of destroyers.

Now, although the efficiency of the present Brazilian Army and Navy may be discounted, they are not likely to remain so when energetic European brains direct their councils. A strong Brazilian Navy, which might blockade Argentine ports and stop the circulation of its life blood, viz., foreign trade, is a matter of very serious consideration for that nation, and will necessitate a heavy naval expenditure of national funds, which the Government would very much rather employ in developing the great natural wealth of the land.

Vested interests in this country are said to have had a good deal to do with the peaceful solution by arbitration of the Argentine-Chilian boundary question.

Would it not now be possible, with the friendly assistance of England, for the South American Republics mentioned, to come to some understanding to limit their naval expenditure, not only in their own immediate interests, but also for the benefit of those nations with which they are engaged in trade.

In ancient times more land to furnish the means of existence compelled a nation or tribe to take possession of its neighbour's territory. Now freedom of trade is even of greater necessity, more especially for that great workshop of the world which has to be fed by all nations, viz., the United Kingdom of Great Britain and Ireland.

Lieut.-Colonel C. H. PAYNTER, R. Mon. R.E. (M.) :—I have been very much interested in the whole of the lecture; but there are one or two points on which, I am sure, we should have heard further with great pleasure. The climate of the Argentine has been described as an excellent one, and I believe it is so—and so is the climate of California. But it is a climate which causes the native ladies to age quickly, as the lecturer has said, and has an effect on English women which is the reverse of invigorating, and leads them to wish for an early departure from the country, and while they are residents, to somewhat curtail their energy. This is, I fear, rather an unfavourable feature in the Argentine from the point of view of English colonisation and settlement, as prolonged residence is generally found by most Englishmen incompatible with being cut off from family ties. There has been an illusion prevalent that there was a German Press of considerable strength in the Argentine capital, and as the tone of the German Press is not always favourable to British enterprises, I am very glad that that illusion has been dispelled by the lecturer. The statement that there is no German paper is surprising, in view of the fact that a large German colony has existed in various parts of the continent and in the capital for a considerable time. It would be a great pleasure to many of us to hear a little more detail about the military strength of the country in the way of armaments. The lecturer has described the organisation of the bodies and regiments of troops, but has not said anything about the staff arrangements and the higher offices. The presence of a Board of Agriculture, or something akin to it, would seem to be indicated by measures which have been taken in cases of diseases in cattle. Nothing was said with regard to an Army Board or anything of that kind. That the Republics are not behindhand in equipping themselves with the very best kinds of guns and defensive weapons is shown by the very great skill with which they have selected their war-ships. The war-ships purchased by the Argentine, I can unhesitatingly say, are among the best that have been built, and I believe in our Navy at present the two purchased from them rank among our fastest ships. It is only reasonable to suppose, therefore, that when making their military arrangements they would also be likely to purchase and lay in a stock of the most efficient guns, whether Q.F. or otherwise; and it would be interesting to know what kind of rifles are used by these troops. I imagine it is a country like Africa, where you can see a very long way, and therefore it should be a great country for rifle shooting. The country in which cowboys can lasso cattle at the rate of 60 an hour should indeed afford some very efficient material for, if not Regular cavalry, at any rate something akin to a Legion of Frontiersmen.

Major-General TULLOCH, in reply, said:—All I can venture to say with regard to what Major Paynter has said with reference to colonisation is that it is not at all a country for the ordinary colonising person, who can do very well in Canada, to go out to. The agricultural labourer who can get on and become a wealthy man in Canada would be entirely out of place in Argentina. Labour there is so cheap from Spain and the South of France and Italy that he would stand no chance whatever. There are

only 20,000 English people out there, and they are all people in good positions, who can come home practically when they wish to do so. As for the armaments and details of military organisation of the different Republics, it would take me almost a week to deliver a lecture on that subject. I am now a civilian and a peaceable member of society, who wanders abroad and makes a few notes occasionally which may be, and I hope will be, of use to people who have investments to make or who take an interest in foreign countries. I do hope that this winter some more will follow my example and wander away down to South America, where they will see a country which is as yet but little known to the ordinary traveller.

The CHAIRMAN (General Lord William Seymour, K.C.V.O.):—I have the pleasure to ask you to pass a vote of thanks to the lecturer for the very interesting discourse he has given us. I did not have the opportunity of knowing quite what the lecture was to be, but I find, on following the points of Sir Alexander Tulloch's paper, that they are really all old friends of mine. When he describes that beautiful Bay of Rio de Janeiro, Buenos Ayres, and the ride up to the *Coco Vardo*, it seems to me that 60 years have passed very quickly since I had the pleasure of preceding his footsteps; even to the amount of time (60 seconds) which it took me to be dismounted from my animal when I made my first attempt at lassoing in the streets of Rio de Janeiro. All parts of the lecture were most interesting, particularly about the Basques coming from France and Spain. I was in Basque land, in the South of France and the North of Spain, some years ago, and some of the leading men told me there what a very large emigration was going on from those provinces across the Atlantic to Brazil and to Argentina, and I have been told that they are the very best emigrants that come from Europe. I think the lecturer made a mistake when he said that an order for 2,000 reaper and binder machines had been received in Argentina. I think he meant had been given to Australia. It is very sad to think that the order was not given to England, even although Australia is, happily, one of our Sovereign's largest possessions. Still, we all look at home, and I think we down in Norfolk might wish that those reaper and binder machines had been ordered from there. I have no doubt they are equally good from Australia. Sir Alexander Tulloch found that most of the countries he visited were very sober. I must say a word for a country that suffered severely lately—since Sir Alexander's visit—from the earthquake, namely, poor little Chili. When I had the pleasure of living in Chili a good many years ago, it was a remarkably industrious country, then under British auspices, and I am very sorry to hear that the author thought it had rather gone to the bad, and that he preferred Peru. It is rather curious that he mentioned about the Scottish emigrants having gone from the Falkland Islands and the Welsh emigrants from *Tierra del Fuego* to Argentina, because I was looking up some notes that had been made by my father in the year 1843, and I found that Governor Moody, who was then Governor of the Falkland Islands (he has been heard of since in other parts of our possessions) complained that the few emigrants who had come from Great Britain were seriously meditating emigrating again to an unknown country that they had heard of on the South-East Coast of America. No doubt that unknown country, as it was 64 years ago, is the now famous Argentina. I will ask you to accord a vote of thanks to Sir Alexander Tulloch for the interesting lecture he has given us.

THE BATTLE OFF TSU-SHIMA.

IN MEMORY OF "THE SUVÓROFF."

A PERPETUAL TRIBUTE TO FALLEN HEROES.

Translated from the Russian of Commander Vladimir Semenoff,
Imperial Russian Navy,

[With the Author's permission],

By Lieut.-Colonel W. E. GOWAN, Retired List, Indian Army.

Continued from May JOURNAL, p. 601.

"After leaving the battle-line, the 'Suvóroff,' enveloped in flames, still continued to steam after the Squadron, but soon under our fire lost her foremast and both funnels, and was wrapped in fire and smoke from stem to stern. Positively, no one would have taken her for a vessel at all, so much was she damaged. Nevertheless, even in this pitiable condition, she remained the actual Flag-ship "Suvóroff," and never ceased to fight, firing, as much as possible, out of her still undamaged guns."

Here is another extract from the description of the operations of Admiral Kamimura's Squadron:—

"The 'Suvóroff,' struck by the fire of both our Squadrons, finally withdrew from the battle line. The whole of her superstructure was pierced by innumerable holes, and the entire vessel was enveloped in smoke. The masts had fallen; the funnels toppled over one after the other; she could no longer be steered, and the fire on board was rapidly increasing. But, though outside the fighting line, she still continued to so maintain the struggle, that our warriors rendered what was due to her heroic resistance."

I will now return to my personal impressions.

Amidst the noise of the firing from our own guns, the bursting of the enemy's shells, and the roar of the conflagration, of course, it never entered my head to give a thought as to the direction in which we were turning, whether to windward, or to leeward. But it was not long before I became fully sensible of this. For when the battle-ship, shifting about on her course, lay before the wind, immediately the smoke and flames from the burning wreckage poured forth straight on to the forebridge, where I was. Probably, it was because I was so anxiously looking out for our torpedo-boats that I had not paid attention to the gradual approach of this danger, and only perceived it when I found myself in the impenetrable smoke. The heated air now scorched my face and hands; a caustic sense of burning blinded my eyes; and I could scarcely breathe. I had then to save myself, but

to do this I must face the flames, as in front of me all means of descending to the fore-castle had been shot away. For one moment the thought occurred to me to jump from the bridge on to the fore 12-inch turret, but I soon saw that a jump in that direction was impossible. How then should I extricate myself from this veritable hell? Perhaps someone of the crew, who had seen me in time on the bridge, dragged me down? But how I got to the upper battery, on the familiar spot, near the Sacred Picture of the vessel, I have no sort of recollection, nor can I, in any way, suggest it to myself.

After recovering my breath, drinking water, and bathing my eyes, I was once more able to look round. Here everything was quite comfortable. The large case enclosing the ship's *Ikón* was still intact, and, apparently, after the first random shot, which had wrecked the temporary dressing-station, not even one more had taken its flight to this commodious corner.

Here, too, were standing several of the crew. Amongst them I recognised some of Demchinski's signallers, and I inquired of them about him. They replied that he had been wounded and had gone off to the dressing-station.

These men were all standing in silence, with an outward air of composure, and it was only in the gaze which they directed on me that I perceived feelings of suppressed alarm, expectation, and vague hope. It seemed as if they believed, or wished to believe, that I could still order something needful to be done, something of importance and something salutary, and that they were awaiting such an order. But what could I order to be done? Then why not have counselled them to go below, to take shelter beneath the armour-plated deck and there await their fate? What this would be they and we ourselves knew. But for these men something else was needed. They still felt themselves capable of fighting. These men, "who had thus survived," were very good men!¹ And it seemed to me that it would be a foolish act of harshness to destroy their faith, to quench the last spark of hope, to speak the pitiless truth, to say, that further fighting was impossible, that all was over. No! I could not do this. On the contrary, I so passionately desired, even though deceiving them, to blow upon the spark of their hope. But what then? Let them die in the happy assurance that, perhaps, the following moment would bring with it victory, life, and glory.

As I have already said, the spot, whereon Divine Service was usually held,² was also the spot which the ship's Surgeon had chosen so unsuccessfully for the establishment of a temporary dressing-station. Still, his selection was a good one. Now it was abaft the central 6-inch turret that the fire had begun to develop. Accordingly, we all went off in that direction, and began to drag burning fragments and throw them overboard, through the gigantic rents in the vessel's sides. We found, whilst so engaged, one undamaged fire pump, some lengths of hose (without nozzles), and some buckets made out of oil drums. We worked silently and zealously, for it was a serious work. While we were quenching here all the burning fittings, alongside of us, behind the thin and glowing steel partition, which separated us from

¹ I am unable to explain this cryptic passage.—W.E.G.

² On vessels a temporary chapel is only erected at the precise time for holding Divine Worship.—Author.

the Staff Officers' quarters, raged the real fire, the roar of which at times was audible even amidst the din of battle. Every now and again, some one of us would fall, and either lay there, or get up and walk or crawl towards the ladder communicating with the deck below. No one even regarded such a one: was it not all the same! one more, one less.

How much time thus passed away, 5, 10, 15 minutes, I know not. All at once a thought, clear, but sudden, like a lightning flash, passed through my head, and struck my very heart.

"But what about the conning-tower? What is going on in the 'military post'?"

I rushed in that direction. Fatigue, depression of spirits, disappeared without a trace. My brain worked with amazing quickness, and I instantly recollected that the smoke of the fire was being borne through the rents in the port beam, and that this meant that the starboard was the weather side of the vessel, and so I made for that side. It was not without difficulty that I climbed up through the damaged hatchway on to the upper deck, and here I could scarcely recognise the spot whereon I had so recently stood talking with Demchinski. It was here, as I have already said, that advance was impossible: behind me were the smashed up pinnaces and heaps of burning wood; in front were piles of other fragments; the ladder leading to the forebridge had been shot away; and the whole of the starboard end of the bridge had been destroyed, and even the traverse below the bridge at the other end was obstructed. Hence, to pass from the starboard gangway it was necessary to descend and reascend before the port gangway could be reached. Here the vessel was a little clearer of the wreckage. The booms and other wood-work, though burning and broken down, were not scattered in such disorderly heaps as on the starboard side of the vessel. The 6-inch turret was evidently quite undamaged, for it was still keeping up an energetic fire. The ladder leading to the fore bridge was intact, except that it was blocked with burning hammocks. Five or six men of the turret crew, who had volunteered to follow me and to climb up, actively undertook, under my orders, to drag these hammocks down, and to quench them in the water that had collected on the deck. Suddenly, very close to us, a shell burst with a peculiarly sharp sound, and the splinters caused by it bounded and rebounded in all directions.

"It seems to have struck the 6-inch turret," thought I, as with half-closed eyes I remained for a time holding my breath, so as not to inhale the poisonous gases.

And sure enough, as soon as the smoke had cleared away from the turret, only one gun projected from the embrasure, and that had a helpless cant upwards, and was, moreover, evidently otherwise damaged. At the same moment, Lieutenant Danchitch, turret commander, was seen trying to shove his way out by the armour-plated door, which was also not working properly.

He said: "It's all up with me now; one gun has had its muzzle blown away, and the other has been knocked off its mounting."

I drew near and peeped in at the door. Of the crew two men lay terribly mutilated, and one was in a sitting posture with a fixed stare in his widely-opened eyes, and with both hands pressed against his swaying body. The captain of the gun, with an occupied and

intelligent look in his face, was engaged in quenching some burning rags.

"What are you doing there?" Danchitch asked. "I want to pass through the conning-tower."

"Why? There's nobody there."

"How nobody?"

"It's true. Bogdánoff has this moment passed along. He told me that everything there has been smashed up, and, on account of the fire, they have all come away. Just as he came out the foot bridge was shot away. He had to let himself down. And he did so successfully close to me, and whole."

"Where's the Admiral?"

Before I could get an answer there was another explosion quite close to us, and something struck me from behind on my right leg. The blow was neither violent nor painful. I turned round to look, but none of my men were now on the deck. "Had they been blown to pieces or had they simply gone below?"

Presently I heard Danchitch put the disquieting question: "Have we no stretcher?"

I once more turned in the direction whence his voice proceeded, and, on seeing him, said:

"Why a stretcher?"

His answer was: "You want one—you are losing blood!"

I looked down and close to my right foot there was a pool of blood, but I was still able to stand firmly.

Time, 3 p.m.—"Can you move? Stop a moment, I will detail someone to support you," said Danchitch somewhat fussily.

I was annoyed, and exclaimed: "What do I want with a supporter?" and I began to briskly descend the ladder, but at the same time I was perplexed as to what had happened. When at the beginning of the battle, a small fragment had hit me in the waist, the blow was painful, but now I had no such sensation. Nevertheless, afterwards, when in the hospital, they carried me about everywhere as I lay on a stretcher, I understood why, during a battle, there are heard neither groans nor cries. These all come afterwards. It is evident, then, that our feelings have, in some manner, strict limits wherein to be receptive of external impressions. At first sight only, therefore, may this, with perfect correctness, be regarded as an absurd utterance: "So ill, as to have no feeling at all; so terribly injured, as to have no fear whatever."¹

After passing along by the upper and lower batteries, I descended to the sick bay (beneath the armour-plated deck), where had been established the central dressing station, and, as I did so, I involuntarily drew back towards the ladder.

The sick bay was filled with wounded men.² Some were standing, some sitting, and some were lying down. The last-mentioned were lying either on previously prepared mattresses, or on hastily

¹ I suppose that the Author's meaning is, that a man whilst highly strung with excitement, exercises such a degree of self-restraint as to hold in check, for a time, external impressions; but that when the period of such excitement has passed away, he has to yield to the pain and real extent of his injuries.—W.E.G.

² It is probable that there were more wounded men here than in the whole of the Japanese Squadron.—Author.

spread tarpaulins, or on stretchers, or on the deck itself. It was here that they had begun to experience sensations. The confused rumble of heavy breathings, of half suppressed groans, was diffused through the suffocating and humid atmosphere, impregnated with a kind of sour and mawkish odour. The light thrown by the electric burners seemed to pierce with difficulty through this fetid smell. Backwards and forwards flitted figures clad in long white coats, the edges of which were stained with blood. Towards these same figures wounded men here hurried, there painfully crawled, as if expecting to get something from them, some relief at least, but all were expectant. In a word, everywhere, and from all sides, there was raised a persistent, inarticulate, but nevertheless sure appeal, piercing to the heart, for aid, for the performance of some miracle, for release from suffering—aye, and even for the prize of speedy death.

I did not stop to await my turn, nor had I the desire to make my way before others. I therefore quickly ascended the ladder leading to the lower battery, and here I encountered the Flag-Captain. His head was bound up, three fragments of a shell having hit him on the crown. From inquiries which I made of him, I learnt that, simultaneously with the damage done to the steering gear, and the consequent falling out of the "Suvóroff" from the battle line, both the Admiral and Vladimirski had also been wounded in the head whilst in the conning-tower. The wound received by Vladimirski being so bad, he had to go to the dressing-station, whereupon Bogdanoff, the Third Lieutenant, had relieved him in the command of the battle-ship. And he had received orders from the Admiral to follow in the wake of the Squadron, with the help of the engines only. The explosions on the forebridge were now much more frequent. The shells, which had burst in masses beneath the mushroom-shaped roof of the conning-tower, had destroyed all the apparatus inside and had broken the compass. Fortunately, the telegraph to one engine compartment, and the speaking tube to another had remained intact. A fire, however, had broken out on the bridge itself, and had ignited the hammocks, which it was thought would have protected us from splinters. It had also approached the small tower, occupied by the Navigating Officer, which was behind the military post. And the heat from this fire had become insufferable, chiefly on account of the thick smoke that hung all around. Moreover, owing to the loss of the compass, it was impossible to maintain any sort of regular course. It had thus become necessary to transfer the direction of the vessel to a fighting post, and for every one to leave the conning-tower for some other spot, whence a look out could be obtained.¹

¹ It may be useful to here cite a passage from Captain Klado's work bearing on this subject ("The Battle of the Sea of Japan," by Captain Nicolas Klado, translated from the Russian by Messrs. J. H. Dickinson and F. P. Marchant. Hodder & Stoughton). The "Central post" is a special cabin in the interior of the vessel below the armoured deck, where are all the means of communication (speaking tubes, telephones, etc.), with all parts of the vessel. While the "Military cabin" (conning-tower) remains sound, the commander inside transmits orders immediately to the different parts of the vessel; but if the "Military cabin" is damaged, there only remains for the commander one other place from which to establish communication, viz., "the central post." (See note at foot of page 146, of the work quoted.)—W.E.G.

In the conning-tower all who had been left up to this time were the Admiral, the Flag-Captain, and the Flag-Navigating Officer — and all three had been wounded. Of the rest, Lieutenant Bogdanoff, Midshipman Shishkin, and one sailor had, so far, escaped any injury. On the order being given for the evacuation of the conning-tower, Lieutenant Bogdanoff was the first to go out towards the port end of the bridge. Boldly pushing his way through the burning hammocks, he rushed forward, and then disappeared in the flames that raged about him. Behind him ran the Flag-Captain, but he turned towards the starboard end of the bridge. Here, however, it had been broken down, the ladder, too, had been shot away, so that further progress was barred. There then remained only one way downwards to the military post; with difficulty some of the wrecked material lying on the deck was dragged up, and by using some of it, the grating over the armour-plated shaft was pushed up, and through this descent to the fighting post was effected. Notwithstanding that the Admiral had been wounded in the head, back and right leg (not counting lesser contusions), he preserved a brave bearing. Having reached the fighting post in the manner indicated, from there the Flag-Captain went off towards the dressing-station. But the Admiral, after leaving in the fighting post Colonel Philippovski, Flag Navigating Officer, who had only been slightly wounded, with orders that, unless fresh dispositions were found to be necessary, he was to try and keep to the old course, himself went in search of some spot whence could even fairly be seen the progress of the battle.

The upper deck now presented a scene of burning debris, and, therefore, the Admiral was not able to pass further than the upper battery. This was the place, it will be remembered, where the ship's *Ikón* was suspended. From here he tried to proceed past the port central 6-inch turret, but he was not able to do so. Then he attempted to pass to the starboard of the same turret. It was while attempting this that he received another wound, which at once caused him severe pain. A splinter hit him in the left leg, contusing the solens and gastrocnemius muscles, and injuring the tendon Achilles, for the ball of the foot seemed to be paralysed. They had now to carry him into the turret, and there put him on an ammunition box. After a time he became collected, for he immediately asked: "Why are they not firing from the turret?" He then ordered Krijanovski, who had come in to see him, to find some gun crews, to serve the guns and open fire. But it was pointed out to him that the turret had been damaged, and would no longer revolve. It should here be mentioned that Krijanovski had only just returned from the steering compartment: the steering gear had been repaired; but all three of the steam pipes connected with it had been destroyed. Moreover, there were no means by which orders could be conveyed from the fighting post to the wheel house, for there was no speaking tube, the electrical indicators had been damaged, and the telephone would not work. The engines had to be directed from the fighting post, but they seemed to turn the vessel round where she lay rather than to propel her forward.

The circumstances which I here narrate in the order of their occurrence, and in the form of a connected story, are, of course, not in the shape in which I received them. They were culled at different

times, and from different persons, but to try to reproduce with exactitude half-spoken phrases, that were suddenly broken off by the near bursting of a shell, fragmentary observations thrown out in passing by, detached words, accompanied by a gesture more eloquent than any completed set of words, would be both impossible and objectless. Then again, at a moment when the nervous system was at the highest point of tension, some exclamation, some flourish of the hand, would naturally take the place of many words, and would more clearly express the desired phase of thought, and yet, if these could be represented on paper, they would not be intelligible to anybody.

Under such circumstances time is measured out by moments.

Then there is no opportunity for conversation.

Up to the time of which I am now speaking, the conflagration had not yet spread to the lower battery, although it was raging above it. But now, through the hatchways, funnel casings, and the rents in the central deck, burning fragments spluttered down, and these produced, now here, now there, lesser "conflagrations." Nevertheless, the men still continued with exceptional hardihood to work at the battle stations the wireless telegraph, which was protected by coal sacks. Moreover, the fire seriously threatened the trucks containing the 75 mm. cartridges, which had become collected in this part of the vessel through the damage done to the hoists and rails. A part of these cartridges had, therefore, to be thrown overboard. But we succeeded all the same in putting matters right here.

Of course, the fire generally spread through the vessel not merely in an ordinary way, for it was helped by the enemy's shells, which continued to be showered on us. The losses, too, amongst our men showed no diminution. I myself received at this period a contusion in the left shoulder, and two small splinters hit me in the side.

(To be continued.)

THE MILITARY RE-ORGANISATION OF CHINA.

Translated by permission of the French Minister of War from the
Revue Militaire des Armées Etrangères.

Continued from May JOURNAL, p. 594, and concluded.

THE Regulations for the Ambulances and the Hospitals bespeak further notice. The following is a *Résumé*:—

1. *First Line Ambulances.*—There will be six Ambulances per Corps d'Armée (of two Divisions, numbering about 25,000 men), each capable of receiving 100 wounded. Each Ambulance will have 16 round tents for the wounded, 6 square and 10 round for the *personnel* and *matériel*.

The *personnel* of the six Ambulances will be raised to a total of:—

- 20 Doctors;
- 8 Secretaries;
- 186 Attendants.

In battle the Ambulances will be installed 4 or 5 kilometres (about 5,000 yards) from the fighting line, and will push in advance of themselves, some 600 yards from the line of skirmishers, the stations for dressing and the reception of the wounded.

Coolies will look for the wounded on the field of battle and carry them to the dressing stations, from which they will be sent back to the Ambulance.

On arrival at the Ambulance, the Chief Surgeon will enter on a special register the name and military *status* of each of the wounded. The slightly wounded will be kept at the Ambulances and sent back to their corps as soon as they are healed. The bad cases will be sent back in carriages to the field-hospitals.

2. *Field-Hospitals.*—These hospitals will be installed in houses specially selected or in tents.

The number of field hospitals to be attached to a Corps d'Armée will be fixed later on. Each of them will include:—

- 1 Surgeon in Chief;
- 2 Surgeons;
- 2 Secretaries;
- 40 Attendants.

The dressings will be re-examined. The seriously wounded will be sent to the hospitals at the rear; the less serious cases will be treated in the hospitals where they are and sent back to their corps as soon as possible.

3. *Hospitals at the Rear.*—These hospitals will be installed in buildings capable of receiving 800 cases.

They will each have for the staff:—

- 1 Medical Inspector-General;
- 6 Doctors;
- 2 Secretaries;
- 99 Attendants.

They will keep the units at the front supplied with stores.

The military position and sanitary condition of the wounded received in the field-hospitals will be sent every two days to the provincial *Tou-lien-tchou*.

The number of conveyances and animals of the different sanitary formations is not yet settled. The sanitary *matériel* properly so-called will be kept in time of peace by the troops.

In time of war the sanitary *personnel*, the men attached to the different formations, will be provided from the rank and file of the Army.

All the doctors will be mounted.

The Relative Rank of the Doctors and the Veterinary Surgeons is as follows:—

Doctors.	Veterinary.	Relative Rank.
Medical Inspector of Corps d'Armée		Colonel.
Principal Medical Officer of Division	Veterinary Inspector of Corps d'Armée	Lieut.-Colonel
Regimental Medical Major	Veterinary Principal of Division	Major.
Battalion Doctor	Regimental Veterinary Surgeon	Captain.
Surgeon Lieutenant	Group Veterinary Surgeon	Lieutenant.
	Veterinary Surgeon	Sub-Lieut.

The sanitary *Personnel* is classed as non-combatant.

There do not exist any sections of hospital attendants in time of peace.

The units of the *Tchang-pei-Kian* are far from possessing the sanitary *Personnel* (Doctors and Veterinary Surgeons) provided by the tables of effectives, and a good many years must pass before one can be constituted in accordance with our modern ideas.

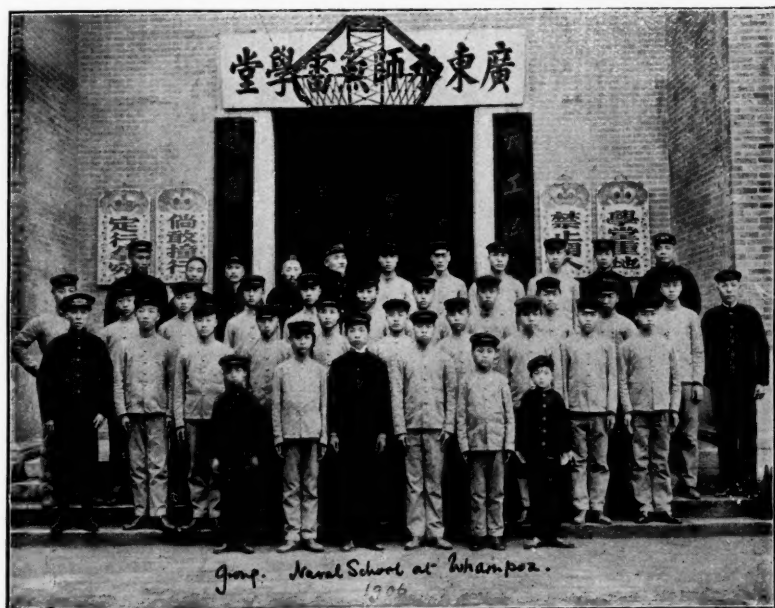
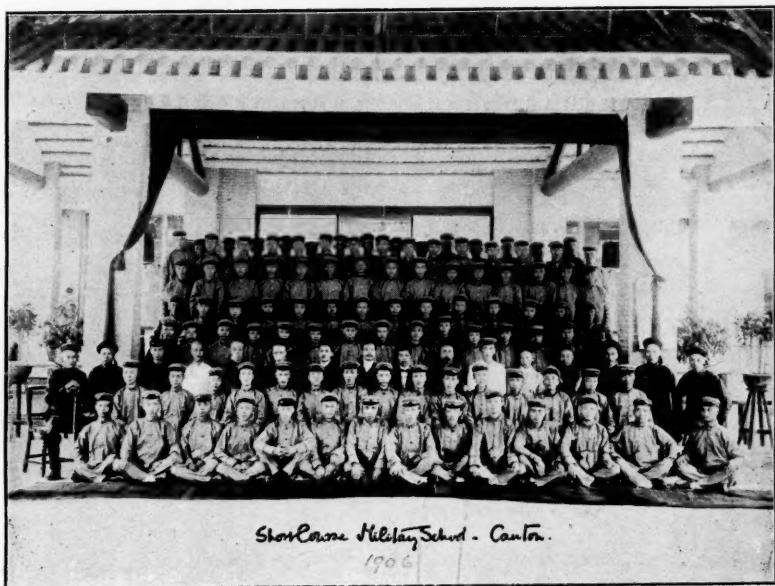
Some of the doctors of the Army of Yuan-Chi-Kai come from the two Chinese Schools of Medicine at Tientsin (the one directed by two French doctors, the other by the Japanese); but it has been decided that in future they shall come from the special military schools recently created at Pao-ting-fou:—

School of Military,
Medicine and Surgery

140 Pupils.
Course: 3 years.
Japanese Professors.
Chinese Pupils from the Tientsin
School.

Veterinary School.

100 Pupils.
Course: A Year for rapid Instruction.
Japanese Professors.



REPRODUCED BY PERMISSION FROM PHOTOGRAPHS IN POSSESSION OF THE
GENERAL STAFF.



A School of Military Medicine is also to be created at Wu-chang, under the direction of Japanese Professors.

The Viceroy of Cantón is also about to start a School of Military Medicine, with three Japanese doctors and two Chinese doctors who have come from the School of Medicine at Tientsin.

Another School of Military Medicine has also been created at Tcheng-tow in Sé-tchouan, under the superintendence of Doctor Legendre. This school will be largely developed.

In order to encourage educated young men of good family to enter the Army in the capacity of doctors, the Viceroy, Yuan-Chi-Kai, has decided that doctors leaving from his schools shall be able to occupy, after examination at Peking, situations—even the highest—in the Civil Administration.

Each of the divisions at present is provided with a Divisional Ambulance; each body of troops with regimental *matériel*. Everything up to the present has been furnished by the Japanese. The *matériel* and the supplies of medicaments are still very incomplete, and the cases of surgical instruments of a bad quality.

Yuan-Chi-Kai has constructed a large modern hospital, well equipped, at Pao-ting-fu; the School of Military Medicine there already affords an excellent field of practical observations.

A modern military hospital is under construction at Wu-chang.

China has given in her adherence to the Red Cross Statutes. An Imperial Decree has even created a Chinese Red Cross Society, which had an opportunity of doing good work in Manchuria; the Empress has gratified the new society by a donation of 100,000 taëls (£15,000); the Viceroy of Chi-li and the Governor of Shan-tung have provided the medicines.

The English also founded at Shanghai an International Red Cross Society, to help the wounded Russians, Japanese, and Chinese in Manchuria, and this society also received a donation from the Empress.

It is shown from what has been related that the Chinese Government is striving to create a modern sanitary service in its Army, but that it is yet far from realising the organisation as it exists on paper.

The Department of Armaments—The Arsenal.—This hardly more exists than on paper. The actual armourers, who have the title of armament officers, possess as yet but a very insignificant technical value, which will, however, be much increased by the near arrival of pupils from the School of Armaments at Pao-ting-fou, who have passed through a rapid course of instruction.

The Chinese arsenals cannot at present dispense with the assistance of foreign experts in the pay of the State. The Chinaman, hitherto devoid of the scientific spirit, cannot in a day transform himself into an engineer capable of directing the manufacture of material so delicate as quick-firing guns and modern explosives.

We know how negligent the Chinese are in the care of their weapons; their arsenals have never yet been able to make the necessary quantity of guns, rifles, shells, and ammunition; they have also been quite unable to reach a standard of quality of work such as had been justly expected from the use of perfect European machinery.

Numerous examples of carelessness testified to in official reports have led the *Lien-ping-tchou* to issue some severe regulations for the maintenance and care of weapons, to reorganise the service of the arsenals, and to create a special *Personnel* for the service of armaments and manufactories.

Armament Officers.—The hierarchy of the special corps of armament officers will be composed of four grades:—

	<i>Relative Rank.</i>
Inspecting Officer of Armaments (1 per Corps d'Armée)...	Colonel.
Principal Armament Officer (1 per Division)	Lieut.-Colonel.
Armament Officer (1 per Regiment)	Major.
Assistant Armament Officer	Captain.

These officers will be educated at a special school, which was started in the month of June, 1905, at Pao-ting-fou, and at the present time comprises forty pupils recruited among young men expecting promotion to Mandarin's rank. In order to secure as soon as possible the number of necessary officers, the course of instruction will only last a year; later on both the scope and the duration of the course will be extended. The course of instruction includes mathematics, drawing, accounts, ballistics, the keeping in order of rifles, guns, and powders, and a study of foreign weapons.

Very minute regulations fix the duties of armament officers in their respective units: the inspection of weapons and implements, the mode of carrying out repairs and the sums charged to this account, the making up of accounts, etc. The commanders of companies, squadrons, and batteries become pecuniarily responsible for every omission in the notification of deterioration, etc. The armament officers, with their working staffs, are to carry out in their respective corps all repairs which do not absolutely necessitate the sending of the work to the arsenal.

The Viceroy Yuan has already succeeded in impressing on his troops the necessity of looking well after their arms.

Service of the Arsenals.—The *Lien-ping-tchou* has laid down in principle that the new troops must have a uniform armament within the next five years.

The old arms will be handed over to the police forces, and it is strictly forbidden to deliver arms to private individuals.

In order to obtain a good uniform armament it is necessary that modern arsenals should be under one single control. The following decisions have already been taken in the matter:—

There will be three large arsenals, established in the interior of the country and out of the reach of foreign enterprises.

The *Central Arsenal*—that of Hupeh, already in existence; the *Northern Arsenal*, the situation of which is not yet settled; the *Southern Arsenal*, in the Kiang-Si at Ping-siang-t sien.

The Hupeh Arsenal will continue to work as at present with its own resources.

The two other large arsenals will be built simultaneously within five years, and will necessitate an expenditure of some ten millions of taëls (£1,500,000). These two new arsenals will commence at once to construct magazine rifles, smokeless powder, and cartridges, and will afterwards construct guns, as money permits.

A special commission is considering the types of weapons at present in use in foreign Armies; the best models will then be adopted and corresponding machinery be purchased.

The Northern and Southern Arsenals will be administered by expert officials, chosen by the *Lien-ping-tchou* from among the candidates of the Viceroys of Chi-Li, Liang-Kiang, and Liang-Kouang.

A special school of arsenal engineers will be founded at once at the Han-yang Arsenal, and will be supplied with foreign instructors.

Finally the Shanghai Arsenal will be provisionally maintained until the completion of the large modern arsenals, but the services of all the unnecessary officials will be dispensed with, and no new work will be put in hand.

In what concerns the other existing arsenals, which are destined to disappear, the present state of things is as follows:—

The Nankin Arsenal does very little work, and is practically only used for repairs.

The Canton Arsenal has never been of any importance, and will be used merely for repairs. The Viceroy's proposals for its enlargement and conversion have not been approved by the *Lien-ping-tchou*.

The Chengtow Arsenal, in the Province of Sé-tchouan, is in course of restoration. The Viceroy, pointing out the isolation of the Province, was able to induce the *Lien-ping-tchou* to preserve it, and to consider it as an annexe of the Central Arsenal, destined to supply the isolated provinces of Sé-tchouan, Thibet, Kansu, and Turkestan.

The arsenal at Té-tchéon is only a cartridge manufactory, but in spite of the high cost of the modern machinery recently purchased in Europe, the cartridges turned out are of very poor quality.

The arsenal of Kaifong-fu will still continue working until the establishment of the new arsenal that was originally proposed to be established in Honan.

With regard to the Grand Central Arsenal, or of Han-Yang, it is to receive at once up-to-date machinery, and will serve as the model for similar establishments. The future school of mechanical engineers will be attached to it.

The four repairing workshops will be retained as such. It is further proposed to establish in each Capital a workshop for carrying out repairs which do not require delicate work. In addition to these workshops, there will soon be in existence, in each province, one or more dépôts of arms and munitions, as well as powder magazines. Chi-Li possesses two of these establishments.

The *personnel* of the repairing shops and of the armament dépôts will be attached to that of the three large arsenals.

From all this it would appear that an interval of five years must elapse before China will be able to commence the manufacture of her own armaments.

The Telegraphic Service.—The telegraphic service, properly so-called, does not yet exist.

The Viceroy Yuan-Chi-Kai is, however, giving attention to creating, in each division, a light field-telegraph section and a wireless telegraphy section per army of three, four, or five divisions. These different sections will also have the duty of establishing military telephonic communications.

A course of field telegraphy is carried out at Pao-ting-fou; the divisions detach successively some non-commissioned officers and soldiers, sufficiently instructed to understand the manipulation of the apparatus with the laying and removal of the lines. This course up to the present has only produced small detachments with but little experience.

The Chinese are also organising the employment of wireless telegraphy; but this delicate branch necessitates the assistance of foreigners, who would not be available in time of war. It is permissible to think that the Chinese military telegraphists, left to themselves, would only be able to use a small part of their apparatus.

The Recruiting Service.—As this service has already been touched upon, we need only recall that the recruiting is *provincial* in principle, that each division of the Active Army draws its recruits and its reservists from a *divisional* region, that the mobilisation and starting off of the reserves is carried out by the officer of the reserve district, provided with this object with a clothing and equipment store.

The recruiting service is still in an embryo stage. The Mandarin and their subordinates who are charged with it have had no experience, and, moreover, the number of reservists of the new organisation is for the present very limited.

Remount Service.—No real remount service has yet been organised.

The Viceroys and Governors select officers or officials as purchasers who, provided with funds for the purpose, proceed to the horse and mule breeding regions, and who send the animals purchased to the corps. These are not sent to the remount dépôts to be gradually habituated to the new régime; they are distributed among the units which carry out the breaking-in and arrange the work so as to avoid overworking.

In addition to the veterinary surgeons, of whom as yet there are only a very small number, the cavalry and artillery camps have each a special officer, the *Tchâ-mâ-tchang*, who inspects the horses and exercises a general supervision of the grooming, feeding and shoeing and notifies to the veterinary surgeon sick horses.

These *Tchâ-mâ-tchang* are all the more necessary as the Chinese officers have, as a rule, but a very rudimentary knowledge of hippology, training and the rational treatment of horses. The Chinese training has been up to the present confined to teaching a fast amble, which exhausts the horses in a short time. Some officers having gone through a course in Japan and the Military School at Wu-chang tried, however, to introduce natural movements, but were met with opposition from those of the old Army, who prefer to stick to the comfortable amble.

The horses and Chinese mules eat the stocks of chopped up sorgho grass, the chaff of rice or millett, and sorgho (gaolian) grain. This régime tends to make the animals fat rather than muscular; thus, after ever so little work, the horses—the artillery ones in particular—get into a state of perspiration and exhaustion. The cavalry and

artillery, including the mountain artillery, have horses for their remounts; the train, partly horses and partly mules.

The cavalry horses are not tall enough to produce the mass effects of European cavalry. Moreover, the Chinese cavalry is more rather of the nature of mounted infantry. Well nourished, the animals have sufficient stamina, so long as their packs and harness are not too heavy; but one can foresee that the reputation for stamina of the Chinese horse will suffer from the adoption of the heavy complete modern loads.

The artillery horses are too weak to drag the quick-firing field *matériel* recently brought from abroad, above all in heavy country, and on the Chinese sandy and broken-up roads. Thus the batteries could never make a rapid change of position. The men working the guns are on foot, and often have to push the wheels. In China the present field artillery becomes heavy artillery.

The mountain artillery is remounted on pack horses, which are but indifferent weight carriers. Money is wanting to purchase mules, which cost three times as much but last out three times as long.

The most renowned horse-breeding regions are those of Kalgan, Lamatiao, and Ili. The Ili horses are robust, active, and of greater height than the Mongolian breed, but they cost four times as much.

The question has been raised of establishing breeding studs and of trying by cross-breeding to increase the height and improve the blood of the Mongol horses, which, it is confidently asserted, have degenerated a good deal.

The price of good Chinese horses has much increased owing to the large purchases by the Russians, Japanese, and the Viceroy Yuan, and is now as high as 80 taëls (£12). The best mules come from Shantung. A good young she-mule costs 200 taëls (£30) at least; mules are less dear.

Department of Military Justice.—This service is still quite in an embryo condition.

A special Commission is completing at this time the reform of the Civil Code; it will then take in hand the reform of the Military Code in concert with the *Lien-ping-tchou*.

At present there is in existence:—

A Bureau of Justice and Provostship to the *Lien-ping-tchou*.

A Bureau of Justice in each provincial *Tou-lien-tchou*.

A Provostship in each of the new divisions.

The two grades of the new hierarchy, Judge of Corps d'Armée and Judge of Division, have the rank of Colonel and Lieut.-Colonel respectively.

One of the first evidences of the commission of reform of the code has been the suppression of the bastinado and torturing. It results from this that the corporal chastisement in use among the troops is not so cruel as formerly.

The officials of justice at present are wanting in knowledge. It is sufficient to have gone through a two or three years' law course to reach the position of Chief Judicial Officer in the new organisation.

Barrack Service.—This service is likely to be largely developed in the future, and as the result of the creation of new divisions. As the construction of modern quarters is to be proportioned to numerous

other expenses, the officers of the Chinese engineers will have time to learn and acquire the knowledge of building that they do not at present possess.

The great majority of the present quarters are formed by a collection of mud huts surrounded by a mud wall and a ditch, generally flanked by a small tower at each of the angles.

There exists a camp per battalion, group of artillery, and squadron. The stables are separate. The camps, constructed of mud, would cost, it appears, 20,000 taëls (£3,000) on account of the dearness of carpenters' work; those constructed of brick, 30,000 taëls (£4,500). It is only at Wu-chang that quarters exist similar to those in Europe. They cost about 80,000 taëls (£12,000) for a battalion. The whole of the quarters for a division under the new organisation would require, then, including the *quartier général*, from 1,260,000 taëls (£189,000) to 1,680,000 taëls (£252,000); that is, the cost of the change will come to about 800 taëls (£120) per head more.

The quarters are generally constructed partly by contract, partly by the soldiers under the direction of engineer officers. The repairs are executed by military work.

In conclusion, the greater part of the departments of the new Chinese Army are still very much in the embryo stage; their *personnel* wants experience and knowledge; the *matériel* and means of transport are insufficient. Things are evidently better, for formerly nothing which could be called an army existed, but even now there is very little more than a rough outline of the strictly indispensable.

THE NEW JAPANESE INFANTRY TRAINING (PROVISIONAL) 1ST DECEMBER, 1906.

IMPRESSIONS, FROM THE POINT OF VIEW OF TRAINING, GATHERED
ON READING THE ABOVE.

By Major ISHIURA KENJIRO, Imperial Japanese Infantry.

Summarised from the "Kaikosha Kiji" (Officers' Club Journal),
No. 353, by Captain E. F. CALTHROP, R.F.A.
Communicated by the General Staff.

The chief features of the new Infantry Drill Manual appear to be: simplification and clearness of methods, and regulations based on actual practice—the natural result of recent experience.

As the manual (being a provisional issue) has not received the Imperial Mandate, its contents has not become law, and discussion of them is permissible.

While all training is but a preparation for practice, there is a fear, in view of the reduced term of service, and the youth of so many of the officers, that if too practical, the training may become slack, and precision and thoroughness deteriorate.

To meet the ever-changing emergencies of war, the cultivation of intelligence and resource in the leaders is the modern aim.

The tendency of the French military instruction, adopted by our Army, was to lay down intricate and detailed regulations for every event; so that officers and men came to act like machines. To-day our military training is more after the German model; it has become simpler; the individual intelligence of officers and men has been developed, and independent initiative encouraged.

But, if simplification of procedure is accompanied by rough and ready methods of training; if, because drill has become simplified, we mistakenly assume that a less severe training is sufficient; the men so trained will not only lose exactness, uniformity, and stability, but character will remain unformed, and each man will act for himself, the troops becoming, in time of danger or stress, like a flock of crows.

In my opinion, simplification of methods and regulations, rather increases the labour and responsibilities of the instructor.

Instruction in methods of practical performance must be accompanied by detailed observations and warning, and combined with clear explanation of the object in view.

The minor regulations for interior economy, which have no direct connection with fighting, the rules for duties and conduct in barracks in peace should be laid down and maintained with the utmost rigour. As opposed to these, units should be allowed latitude, and freedom in choice of method, in the instruction of those parts of the drill book that refer to conduct in the field.

INTRODUCTORY NOTE.

The Infantry Training Manual is divided into two parts:—

Part I. deals with fundamental training, and contains the rules on which subsequent practice is to be based.

Part II. deals with fighting; and as latitude is here required, general instructions take the place of rules.

The features of the new edition of Part I. are simplification and curtailment. These are obtained by:—

The elimination of a fixed procedure for matters which can be better dealt with by the commander in accordance with the requirements of the moment.

The omission of movements, which are comparatively rare in occurrence, and instruction in which takes time and tends to obscure essentials.

The curtailment of drill in close formation.

The omission of all reference to "Ceremonial," the distinct character of which is emphasised by its publication in a separate book.

The manual, which this new issue supersedes, was compiled in 1898.

CHANGES INTRODUCED IN THE NEW MANUAL.

With the object of making clearer the intention of the present regulations, of simplification, tightening the bonds of discipline, strengthening *moral*, and also as a result of the experience gained before and during the late war, as noticed by the various units in the Army, alterations and additions have been made in the infantry training and embodied in a new provisional manual.

¹10. *Position of Attention*.—The angle between the feet to be 60° (approx.). The palm of the hand to be close to the seam of the trousers.² (This is found to be a more natural and easily maintained position.)

14. *Marching*.—(As it is unnecessary to have two styles of marching, the desiderata of a military step being that it should impart a soldierly bearing, and, at the same time, be easily maintained; one style of marching only is laid down. For these reasons the words "Cease parade step!" are cancelled.)³

O. 18. *Stepping Back*.—This paragraph is cancelled.

O. 22. *Changing Step*.—(Instruction in this as a formal drill movement being of no benefit, directions merely how it may be performed are given in paragraph 82.)

¹The numbers refer to the paragraphs in the text of the new book. "O" indicates paragraphs in the old book. The matter contained in brackets consists of explanations and reasons for changes.

²The 1898 Manual laid down 90° (approx.), and "Palms turned outwards at an angle of 45° with the seam of the trousers."—E.F.C.

³In the 1898 Manual the regulation step resembled the German parade step. To avoid unnecessary fatigue on the line of march, etc., it was laid down that the troops might march in a natural fashion on the command "Cease parade step!" With the exception that on raising the leg the toe is *not* pointed downwards, the new directions for marching do not differ from the old ones. The directions are, however, more or less general, and representatives from regiments are now being instructed at the School of Musketry in a compromise between the "parade step" and the natural style.—E.F.C.

34 (O. 46). *Firing Kneeling*.—(In order to maintain a steadier position, the right leg is to be placed on the ground.)¹

O. 43, 45, 47. *Firing by Word of Command at Individual Instruction*.—(This is cancelled as harmful, and not possessing any advantages.)

O. 53. *Charging Step*.—(The step immediately preceding the assault.) This is cancelled. (Practical experience in the field has shown this to be entirely unnecessary.)

44, 45, and 46. *Firing in Extended Order*. The principles governing the conduct of this, as a result of war experience, are laid down.²

SECTION TRAINING.

60 (O. 70). *Marching, Rear Rank in Front*.—(Reference to this as regards bodies larger than a section is omitted as redundant.)

61. *Distance Between Ranks*.—This is increased from 24 inches to 30 inches. (The former distance was found too short.)

Changing Ranks.—Cancelled. (The original front, as told off, will always be regarded as the proper front. This is laid down for the purpose of simplification and for facilitating the process of forming fours and files.)

63 and 64. *Dressing*.—The two methods of dressing: (a) on markers; and (b) individually by files, are now distinctly laid down.

O 89. The commands, "Fire, standing (kneeling or lying)," and "About turn! Halt! Fire standing (kneeling or lying)" when moving in extended order, are cancelled. (Found by experience to be unnecessary.)

73. *Kinds of Fire*.—"Slow" fire is abolished. (Firing in extended order will be regarded as the normal condition. There will be two regulation kinds of individual fire—"ordinary fire" and "rapid fire," the latter for special occasions. The conditions for good shooting are: steadiness, deliberation, and the choice of the right moment to fire; and although a special rate of fire, such as "slow fire," may be laid down, it will seldom happen that the opportunities for firing will coincide with the special rate of fire ordered. For these reasons "slow fire" as a special rate of fire is abolished.)³

89 (O. 107). *Change of Direction*.—The procedure for changing direction through a very small arc is abolished. (Two methods for small changes of front—through a small arc, and through a very small arc—being unnecessary; one method only is laid down.)

¹ Instead of the knee. The body now rests on the inside of the leg and foot, instead of on the heel as formerly permitted. It is an almost impossible position for Europeans.—C.V.H.

² 44 reads as follows:—"The usual attempt to gain effect by rapidity of fire is illusory. No matter what the circumstances may be, the rules for shooting must be strictly observed. Aim must be taken with care and deliberation, and every endeavour made to make the fire effective."

46 reads—"In shooting, the following points are to be desired:—Quickness in picking up a target; selection of a suitable position; use of ground; rapidity in loading; proper adjustment of sights; facility in handling the rifle in various positions and at various ranges; quickness in aiming; steadiness; experience in laying at obscure targets."—E.F.C.

³ The directions for "slow fire" were as follows:—"At the command 'Slow fire,' the soldier will fire at the slowest rate, alternately with his neighbouring file."—E.F.C.

O. 109, 110. *Forming Two-deep from Fours, and vice versa, on the Move.*—This is cancelled. (Instruction in this as a regulation procedure has no value.)

98. *March at Ease.*—In addition to marching at ease on the line of march, troops may do so on broken ground at manœuvres and on the battle-field, when the regulation step would be altogether impracticable.

103 (O. 124). The interval between skirmishers is fixed at two paces (approx.). (This is the result of practical trial.)¹

108 (O. 130). (When halting skirmishers, the command "Halt!" only will be given, when each man will adopt the most suitable position (kneeling or lying down). For the leader to order the positions is found impossible in practice.)²

Loading on the Move.—This is cancelled, loading being performed only at the halt. (Loading on the move must occasionally cause delays and be prejudicial to discipline. This change may cause a few men to arrive at the firing point with empty rifles; but with the magazine rifle there is no fear that the majority will be late in opening fire.)

108 (O. 132). *Rushes.*—These will be carried out at the fastest pace (the run). (Results of recent war experience.)³

119 (O. 142). A line of skirmishers, besides closing to line, may close to any other formation.

COMPANY TRAINING.

123 (O. 145). The words "and on ceremonial parades" are struck out from the occasions on which line formations are used (As the instructions for ceremonial parades are included in the "Military Ceremonial" Manual, their inclusion in this manual is unnecessary. The same remarks apply as regards the battalion and regiment.)

129 (O. 155). The distance between sections in company column (column of sections) is increased from 6 to 8 paces. Movements to a flank in company column are here authorised.

143. *Dressing.*—Remarks on the dressing of a section apply here (as also to the battalion). Instructions for dressing a company in column are now included.

O. 171. *Forming Square.*—This is cancelled. (As this manœuvre is performed only on very special occasions, its instruction as a drill movement is not warranted.)

BATTALION TRAINING.

156 (O. 192). *Double Column of Companies.*—Cancelled as a normal formation (The occasions on which it may be used being confined to the assembly, and to movements outside the field of fire, for which purposes battalion column is thoroughly suitable, no reasons for its retention remain. Further, its abolition tends to simplification).⁴

¹ The former regulation fixed the interval at from "from one to two paces."—E.F.C.

² The word of command originally being "Halt, lie down," or "Halt, kneel."—E.F.C.

³ Formerly at the double. The normal length of a rush (about 100 yards) remains the same.

⁴ The normal formations of the battalion are therefore reduced to two: line of company columns, and column of sections.—E.F.C.

The intervals and distances for normal formations are increased from 6 to 8 paces, as in company column. (The intervals and distances for normal formations are fixed and any alteration is forbidden. The present increase naturally causes an increase of front when deployed. The *raison d'être* of the normal formations is their strict and exact maintenance, and no departure from them is permitted.)

159 (O. 195). *Dressing*.—Line of company columns. (As the dressing and covering of each rank and of every file throughout a battalion is a matter of great difficulty, not only wasting time but tending to disturb the arrangement of the various companies, it is now laid down that (a) the guides on the directing flank shall be correctly covered, and (b) the leading sections shall be correctly dressed on the same alignment. All other dressing is to be by companies only.)¹

Battalion column (column of sections). (The late method of dressing a battalion in column of sections by putting out guides to either flank being peculiar to this formation, it is now altered so as to conform to the general method of dressing.)

O. 205. *Changing from March Formation to Normal Formation*.—This is cancelled as a fixed procedure. (This is impossible to perform by word of command, and is better carried out by instructions suitable to the situation. A fixed method is therefore unsuitable to this manual, and falls outside the scope of the book.)

163. Taking ground to a flank in normal formation is laid down for the first time. (This being a convenient movement, suitable to various circumstances, it is included as a means for changing direction.)

165 (O. 209). *Deployment*.—Further instructions as to the deployment of a battalion are added. General principles of the attack (such as putting one company in reserve) are inserted in Part 2. Questions of terrain and other matters affecting the mode of deployment are also considered.

166 (O. 211). *Regimental Drill*.—The regimental commander will direct his command by means of *orders*² instead of, as hitherto, by the *caution* (which is nothing but a brief order), which preceded the executive word of his subordinates.

(The movements of a regiment in assembly formation are also now clearly laid down. On service the movements of a regiment in assembly formation will, however, be very rare.)

170. The instructions regarding the deployment of a battalion apply to that of a regiment. The indication of one common objective for all the battalions of a regiment in extended order is cancelled, as practically never occurring in practice.

171. *Brigade Drill*.—The objects and principles of brigade drill are here explained and the instructions for leading a brigade laid down.

O. 218. Instructions for the movements of a brigade in assembly formation are cancelled. (A brigade will so rarely move in close formation that instruction in it is unnecessary.)

¹ While the dressing and covering off of every man throughout a battalion was not explicitly laid down, many commanders read the somewhat vague instructions in the above sense. A battalion at a review was a masterpiece of dressing.—E.F.C.

² Verbal and written orders, not words of command.

THE TACTICAL EMPLOYMENT OF PACK ARTILLERY—THE INFLUENCE OF ARMAMENT ON THE QUESTION.

By Major K. K. KNAPP, R.G.A.

IN an article, which appeared in the JOURNAL of the Royal United Service Institution for February, 1906, I discussed the methods of tactical employment, for which pack artillery is especially suitable under modern conditions of warfare, and I would now develop the subject further by a consideration of the equipment with which that nature of artillery should be armed, in order to effectively carry out the rôle of immediate auxiliary of infantry. Pack artillery could not afford infantry the close and effective support which they require, unless armed with a suitable equipment, and this they do not possess while equipped with the existing gun. Mounted, as it is, on a carriage, which is not provided with means of absorbing recoil, the 10-pounder B.L. is quite unsuited to modern tactical conditions.

To give infantry effective support, batteries of pack artillery require an equipment which is suitable for:—

1. Searching ground behind cover at decisive ranges.
2. Firing from hidden positions at decisive ranges.
3. Firing with safety over the heads of the attacking infantry up to the latest possible moment in the assault.

Q.F. guns and magazine rifles have rendered the use of cover, both by the attack and defence, so essential that the spade will, in future, be extensively employed in providing this protection. Infantry, well-entrenched, are chiefly vulnerable to a searching artillery fire, and it is only by effective fire of this nature that the hostile infantry will be driven out of their positions, or forced to keep their heads down under cover during the later stages of the attack. It is further necessary to maintain this artillery fire against the enemy's infantry positions up to the latest possible moment in the attack, so as to prevent the enemy bringing a heavy and well-aimed fire to bear against the assaulting troops, until it is too late to break the force of the assault.

Gun equipments are, by their nature, unsuitable for this purpose, even if provided with recoil-absorbing carriages and quick-firing in the full acceptance of the term; for a high muzzle velocity and consequent flat trajectory of shell preclude the possibility of their effectively fulfilling any of the above-mentioned requirements. The howitzer is really the only weapon capable of giving the infantry close and effectual support, as it is specially designed for high-angle fire, by which alone the desired results can be obtained. The angle of departure is so steep

that shell can be fired at short ranges from positions hidden by high intervening obstacles, and the steep angle of descent not only enables ground immediately behind cover, and trenches to be thoroughly searched, but also allows of fire being maintained with safety over the heads of advancing troops far longer than is possible with the direct fire of guns.

As a pack transport equipment, howitzers possess the further advantage over guns, that they can be made to throw a shell more powerful than that of a gun of similar weight, because the length of shot travel necessary for accuracy is much shorter in the former than in the latter nature of weapon. In view of the recent great advances made in the construction of *matériel*, it may be hoped that the manufacture of an howitzer equipment, suitable for pack transport and capable of firing a 20-lb. shell with good effect up to a range of 5,000 yards, will prove possible.

If so, an equipment of this nature would also be suitable for the work which pack artillery has to perform in a hilly country, for the difficulty of searching the reverse side of hills, and the powerlessness of the existing mountain guns against hill forts have been experienced often enough on the frontier of India in recent years to give rise to a doubt whether guns are the most suitable form of equipment for hill-fighting. The question, indeed, became a vexed one not long ago, but a strong feeling existed against replacing guns by howitzers, as long as the latter were represented by short range weapons of little power. The matter will, however, present a different aspect, when a howitzer is manufactured which has greater shell power than the gun, and a range sufficient for the tactical conditions of hill-fighting, as well as those of modern warfare in more open country.

The tactical employment of pack artillery as the auxiliary of infantry should, therefore, be considered, as applied to batteries armed with suitable howitzers, and not to mountain batteries armed with the existing unsuitable equipment. The subject, then, resolves itself into the question, whether batteries of pack artillery armed with howitzers, or batteries of wheeled artillery are the more suitable to accompany infantry in the attack, as accompany it they must to within decisive gun range, if they are to give the infantry timely and effectual support, when and where they want it.

The evidence of the Russo-Japanese War shows how necessary this close support of infantry is. The Japanese commanders quickly recognised it and used their batteries of pack artillery extensively for the purpose, pushing them forward with the infantry to decisive gun range. They found that pack artillery is often the only nature of artillery which can, during an action, change its position or advance in support of infantry by daylight; it is not easily stopped by fire, and an animal shot does not bring a gun to a standstill. Whether by replacing casualties with spare animals, or by getting the guns into action by hand, the Japanese mountain batteries managed to work their way forward to short ranges in spite of losses. At critical periods of the attack they were often to be found in action just behind the firing line, where their presence gave great moral support to the infantry, and on several occasions the fire of their low-power guns, used as howitzers, produced decisive effect upon the Russian infantry in their trenches.

On the other hand, the Japanese heavy and field artillery were rarely able to afford the infantry effective support. This was not due so much to inferior *matériel* as to the changed conditions which Q.F. guns have introduced on the battle-field. The ranges at which the heavy and field batteries come into action now in the early stages of the fight, are so long (effective gun ranges extend up to 4,000—4,500 yards) that it is not possible for these guns to afford infantry the necessary support from the positions they first occupy. Their fire from long ranges has neither sufficient moral or destructive effect upon infantry in trenches, and it is difficult for artillery commanders to closely follow the progress of the attack from such distances.

Any change of position to closer ranges by daylight is practically impossible for wheeled artillery in the face of Q.F. guns, as the risk of being annihilated, when limbering or on the move, is prohibitive. On several occasions during the war attempts were made by both Russian and Japanese field batteries to change position under fire, but in most cases these attempts ended disastrously, and the field artillery of both Armies was gradually forced to the conclusion that it is impossible for field batteries to manœuvre by daylight in the face of hostile artillery without courting disaster. As a result, the Japanese field artillery seldom afforded their infantry close support, and yet it is fair to assume that the field gunners of the Japanese Army were animated with no less courage and enterprise than their infantry.

The experiences of the war in Manchuria have thrown much light upon the modern conditions of warfare, and to talk of those experiences as abnormal shows a want of appreciation of the changes which Q.F. guns have introduced in tactics. There are few lessons to be drawn from that war, which are not applicable to any theatre of operations, whether in Europe, Africa, or India, and one that should not be neglected is the necessity for close support of the infantry in the attack.

The evidence seems conclusive that if pack artillery is not available, the infantry will often have to make the assault without effective artillery support, and this will almost inevitably result in terrible losses before the assault can succeed. To wait until the heavy and field guns silence the hostile artillery—a difficult matter when guns are protected by shields, and further cover is provided for the detachments by entrenchments—or obtain so decided a superiority that batteries can move forward to decisive ranges with comparative safety, is impossible; it would generally end in the attack fading away through its own efforts.

Moreover, it is no easy matter to establish superiority of fire where the opposing forces of artillery are fairly matched, and once the main forces of artillery become engaged, the artillery duel is likely to continue throughout the battle. Even when one force is inferior to the other in gun power, and superiority of fire is established by the stronger, there will probably be no finality to the artillery duel; for the weaker artillery ceases fire with the batteries which are in danger of being overwhelmed, and detachments are withdrawn under cover to await a favourable opportunity of re-opening fire. An attempt at moving forward would be just such an opportunity, and might lead to loss of the advantage which the stronger artillery has already gained.

As the war in Manchuria progressed, the Japanese infantry gave up looking to their field artillery for close support, and, when pack artillery was not available, fought their way forward to the assault unsupported. In every case they eventually succeeded, after suffering terrible losses, and in spite of the extreme exhaustion which days of continuous fighting at close quarters and the hardships adherent thereto, viz., want of food and water, cold, continual strain, etc., produced. One may fairly say that the wonderful stamina which carried the Japanese infantry through these hardships had as great a share in their victories as the intrepid bravery and dogged determination which finally crowned their efforts at assault with success.

Though British infantry are second to none in the world for intrepidity and resolution, it is doubtful whether they, or the troops of any other civilised Power, possess a stamina and power of endurance equal to that of the Japanese. And as in addition the number of trained soldiers that we possess is strictly limited, it is advisable to provide our infantry with the certain and effective support of artillery on the battle-field, in order that they may have every chance of winning victories before the strain of incessant fighting passes beyond their powers of endurance, or the severity of their losses reduces them below the number sufficient for the task in hand.

As recent events have proved that pack artillery is the only means by which this necessary support can be assured, it is to be hoped that the desirability of adding some batteries of pack artillery to each division of the field army will be recognised before long. A brigade of three batteries per division is the proportion required; the batteries should be attached to infantry brigades during fighting, and independent of the bulk of the artillery, which must be divisional and employed in engaging the enemy's artillery with their concentrated fire.

Though under the orders of infantry brigadiers, and moving with the infantry, these howitzer batteries will be able to render valuable assistance to the heavy and field guns in their duel with the enemy's artillery. From the advanced positions, which they occupy, their high-angle fire will tell with much effect against the enemy's shielded guns, and the batteries should be used for that purpose, until they are required to turn their fire against the enemy's infantry positions. The Japanese utilised the fire of their mountain guns in this way and produced considerable effect in spite of the unsuitability of their equipment for the purpose.

Close communication between brigades of infantry and batteries which are sufficiently mobile to go wherever infantry can go, will be easy, and general officers commanding these brigades will be able to ensure the speedy application of the fire of their batteries against the enemy's infantry position, when and where it is most required. The infantry would derive the greatest moral support from the knowledge that the effective and opportune assistance of artillery is thus assured to them.

With the close support of the infantry provided for by batteries, whose chief rôle is to bombard the enemy's infantry positions, the fire of the heavy and field artillery, in so far as it can be spared from keeping down the fire of the enemy's artillery at the time of the assault, would be best employed in cutting off the point of attack. This is a method of support which could be carried out effectively without

change of position, and might exercise considerable influence on the assault by preventing the enemy from bringing reinforcements from other parts of their position to the point threatened.

I venture to think that the foregoing offers a satisfactory answer to most of the objections raised in the criticism, which appeared in the *JOURNAL* for May, 1906 (pp.721-3).

It is not my desire to claim for pack artillery merits outside its own sphere. There is no question that the bulk of the artillery with the field army must be medium field artillery, but it is well to consider in the light of recent experiences, whether batteries of that nature are suited to fulfil all the requirements of the modern battle-field under the normal conditions of warfare, as claimed by the writer of the above-mentioned criticism.

As the necessity for closely supporting infantry increases with each improvement in war *matériel*, so, too, does the difficulty of providing for that support with the existing means become greater. The power of movement of wheeled artillery under fire is now limited by more than difficulties of ground, and the advantage of rapidity of movement, which horse and field batteries have hitherto had over pack artillery, is now discounted by the greater power of movement which, under the new conditions, the latter possesses on the battle-field.

Each nature of artillery has its useful purpose, and in these two articles my aim has been to show what a powerful factor for success pack artillery may prove to the field army, when it is re-armed with a suitable equipment.

NAVAL NOTES.

Home

The following are the principal appointments which have been made: Rear-Admiral—Sir Percy M. Scott, K.C.V.O., C.B., to Command of First Cruiser Squadron. Commodore—F. T. Hamilton to be Inspector of Target Practice. Captains—D. A. Gamble, M.V.O., to "Vernon"; C. E. Kingsmill to "Repulse"; S. H. Carden to "Agamemnon"; E. F. Charlton to "Magnificent"; M. E. Browning to "Commonwealth"; A. W. Weymouth to "Warrior"; A. J. Henniker-Hughan to "Exmouth"; W. B. Fawcner to "Prince of Wales"; J. R. Hemsted to "Repulse"; E. Hyde Parker to "Niobe"; C. A. Christian to "Ariadne"; T. Jackson, C.B., M.V.O., to "Crecy"; W. C. Pakenham, C.B., to "Antrim"; A. P. Stoddart to "Caesar"; H. C. Da Costa to "Cornwall"; H. P. Williams to "Irresistible"; G. H. B. Mundy, M.V.O., to "Canopus"; R. H. J. Stewart, M.V.O., to "Goliath." Commanders—C. E. Menro to "Mutine"; C. Maclachlan to "Scylla."

The undermentioned officers have also been selected for the following appointments:—Rear-Admiral J. R. Jellicoe, C.V.O., C.B., to be Rear-Admiral in Atlantic Fleet, vice Rear-Admiral G. Le C. Egerton, C.B.; Captain R. H. Bacon, D.S.O., to be Director of Naval Ordnance and Torpedoes, vice Rear-Admiral J. R. Jellicoe. These appointments will take effect when the vacancies occur during the summer.

The first-class battle-ship "Exmouth," late flag-ship of the Channel Fleet, paid off at Portsmouth on the 24th ult., and recommissioned on the following day as flag-ship of the Atlantic Fleet; the flag of Vice-Admiral the Hon. Sir A. G. Curzon-Howe, K.C.B., C.V.O., C.M.G., being transferred to her the same day from the first-class battle-ship "Caesar," which latter ship is now attached to the Devonport Division of the Home Fleet. The first-class battle-ship "Commonwealth," lately attached to the Atlantic Fleet, which has been undergoing extensive repairs at Devonport after her collision with the "Albemarle," paid off at Devonport on the 27th ult., and recommissioned the following day for service in the Channel Fleet.

The first-class cruiser "Crescent," bearing the flag of Vice-Admiral Sir J. Durnford, K.C.B., D.S.O., arrived at Portsmouth on the 21st ult. from the Cape of Good Hope Station; the Admiral's flag was struck at sunset, and the ship paid off on the 31st ult. at Portsmouth. The second-class cruiser "Scylla" had her complement brought up to sea service on the 14th ult. at Chatham, and left on the 24th ult. for special service in the West Indies. The second-class cruiser "Forte" arrived on the 29th ult. at Chatham from the Cape Station, and will pay off at that port.

Home.

The New Torpedo-boats.—The twelve first-class torpedo-boats provided for in the programme for 1906-7, and recently ordered to be built by contract, are to be numbered consecutively from 13 to 24. The boats will be larger and will have greater capacity for the storage of oil fuel than torpedo-boats Nos. 1 to 12, built under the programme for 1905-6, whose length varies from 166 feet 6 inches to 180 feet, with displacements varying from 215 to 235 tons. The new boats will vary from 173 feet to 185 feet in length, with displacements from 251 to 280 tons. Their engines will be of 4,000-I.H.P., (250-I.H.P. in excess of the power of Nos. 1 to 12), and their storage for oil fuel will range between 23 and 25 tons at load draught. The new boats will steam 26 knots, and will be equipped with two 12-pounder Q.F. guns and three torpedo tubes. The boats will be built by the following firms:—Two by Messrs. Denny Brothers, Dumbarton; two by Messrs. Hawthorn, Leslie & Co., Newcastle-on-Tyne; one by Palmer's Shipbuilding Company, Jarrow; two by Messrs. Thornycroft & Co., Woolston; four by Messrs. J. S. White & Co., Cowes; and one by Messrs. Yarrow & Co., Poplar.

Shipbuilding Estimates of the Powers.—The Admiralty state that the total sums set down in the Navy Estimates, 1907-8, of Great Britain, France, Germany, and the United States for shipbuilding, repairs, and armaments, "on the same basis as the answer given on 13th November, 1906," to Mr. Bellairs, are as follows:—

Great Britain.

	1907-8 Estimate.
Shipbuilding	£8,118,202
Repairs and maintenance of material (<i>i.e.</i> , hulls, machinery, and equipment, anchors, cables, &c.), but not stores	1,800,198
Armament and first outfit of ammunition for new ships and re-armed ships	1,127,000
Repairs and maintenance of guns and torpedoes	62,000
Total	£11,102,400

France, Germany, and United States.

Aggregate sums voted for shipbuilding, repairs, and armaments:—

Country.	Financial Year.	Estimates.
France	January to December, 1907	£5,724,468
Germany	April, 1907, to March, 1908	7,287,025
United States	July, 1907, to June, 1908	9,387,072 ¹
Total aggregate		£22,398,565

¹ This figure includes a sum of £821,946 towards the accumulation of a reserve supply of ammunition.—*Times*, &c.

Steam Trials: H.M.S. "Achilles."—The "Achilles" is one of the vessels of the "Duke of Edinburgh" class, in which it was arranged that the whole of the machinery should be interchangeable. She is the fifth of the class to have been tried, the others being the "Duke of Edinburgh," "Black Prince," "Cochrane," and "Natal," while the trials of the "Warrior" have still to take place. She was built at Elswick and engined by R. and R. Hawthorn, Leslie & Co., Limited. Her water-line length is 480 feet, her beam 73½ feet, her mean draught 27 feet, and her displacement about 13,550 tons. Her coal capacity is 1,000 tons at load draught.

Home.

The cylinders are 42-inch, 69-inch, 77-inch, 77-inch by 42-inch stroke, and were designed to run at 135 revolutions per minute while developing 23,500-H.P. The boiler installation comprises six cylindrical boilers and nineteen Yarrow boilers, to work at a pressure of 210 lbs. per square inch.

She has recently completed her trials, and the following record of them will be found interesting :—

	$\frac{1}{4}$ th power trial.	$\frac{1}{4}$ th power trial.	Full power trial.
Draught forward	26ft 5½in.	26ft. 7in.	26ft. 7½in.
Draught aft	27ft. 6in.	27ft. 6in.	27ft. 6½in.
Steam in boilers	185 lb.	195 lb.	201 lb.
Vacuum	27.7in.	26.15 in.	26.36in.
Revolutions	84½ per min.	126.1 per min.	139.4 per min.
I.H.P.	4832	16,009	23,963
Air pressure	1in. for last three hours	1in. on Yarrow boilers, 4in. on cylindrical boilers.	1in. on Yarrow boilers, 1in. on cylindrical boilers.
Speed	14.6 knots by bearings	21.58 knots on measured mile	23.272 knots on mile with 23,275 H.P.
Coal per I.H.P.	1.88 lb.	1.85 lb.	2.03 lb.
Water consumption (main engines)	16.95 lb.	15.37 lb.	} 19.9 lb.
Water consumption (aux. engines)	3 lb.	2.5 lb.	
Loss of water	12.42 tons	33.05 tons	9.8 tons

The trials, we are informed, were in every way satisfactory, and the machinery worked exceedingly well.—*Engineer.*

ABSTRACT OF NAVY ESTIMATES FOR 1907-1908.

Votes.		Estimates, 1907-1908.				Estimates, 1906-1907.				Difference on Net Estimates.		Votes.
		Gross Estimate.	Appropriations in Aid.	Net Estimate.	Total	Gross Estimate.	Appropriations in Aid.	Net Estimate.	Total	Increase.	Decrease.	
		£	£	£	Numbers.	£	£	£	Numbers.	Numbers.	£	
A	I.—Numbers.	128,000	—	128,000	128,000	128,000	—	128,000	128,000	—	—	A.
	Total number of Officers, Seamen, Boys, Coastguard, and Royal Marines											
	II.—Effective Services.											
1	Wages, etc., of Officers, Seamen, and Boys, Coastguard, and Royal Marines	7,006,412	136,712	6,869,700	6,869,700	6,946,527	135,827	6,810,700	6,810,700	59,000	—	1
2	Victualling and Clothing for the Navy	2,441,217	444,817	1,996,400	1,996,400	2,582,099	528,899	2,053,200	2,053,200	—	56,800	2
3	Medical Establishments and Services	287,856	19,156	268,700	268,700	294,797	19,297	275,500	275,500	—	6,800	3
4	Martial Law	14,295	95	14,200	14,200	14,795	95	14,700	14,700	—	600	4
5	Educational Services	236,831	64,331	172,500	172,500	229,461	63,861	165,600	165,600	6,900	—	5
6	Scientific Services	90,280	25,180	65,100	65,100	90,193	25,093	65,100	65,100	—	—	6
7	Royal Naval Reserves	426,518	8,218	418,300	418,300	434,761	8,161	426,600	426,600	—	8,300	7
8	Shipbuilding, Repairs, Maintenance, etc.:—											8
	Section I.—Personnel											
	Section II.—Matériel											
	Section III.—Contract Work											
9	Naval Armaments	2,571,700	21,800	2,549,900	2,549,900	2,429,400	21,800	2,407,600	2,407,600	142,300	—	9
10	Works, Buildings, and Repairs at Home and Abroad	8,420,200	385,000	8,035,200	8,035,200	8,355,200	385,000	7,650,000	7,650,000	208,000	—	10
11	Miscellaneous Effective Services	7,783,000	137,000	7,646,000	7,646,000	8,725,400	197,000	8,588,400	8,588,400	—	942,400	11
12	Admiralty Office	2,508,700	160,000	2,348,700	2,348,700	3,135,123	149,123	2,986,000	2,986,000	—	637,300	12
	Total Effective Services	2,792,400	34,000	2,758,400	2,758,400	1,986,500	32,000	1,954,500	1,954,500	803,900	—	13
	III.—Non-Effective Services.											
13	Half-pay, Reserved, and Retired Pay	414,437	13,437	401,000	401,000	495,080	12,880	482,200	482,200	—	81,200	14
14	Naval and Marine Pensions, Gratuities, and Compensation Allowances	373,350	8,750	364,600	364,600	360,250	8,750	355,500	355,500	13,100	—	15
15	Civil Pensions and Gratuities	£30,467,196	1,458,496	28,908,700	28,908,700	31,079,596	1,670,796	29,408,800	29,408,800	1,233,200	1,733,300	16
	Total Non-Effective Services	850,775	12,875	837,900	837,900	835,580	12,880	825,000	825,000	17,200	—	17
	Grand Total	1,921,745	19,745	1,902,000	1,902,000	1,276,028	19,728	1,256,300	1,256,300	45,700	—	18
	Total	371,330	430	370,900	370,900	384,038	398	383,700	383,700	—	12,800	19
	Grand Total	£2,543,850	33,080	2,510,800	2,510,800	2,493,708	33,006	2,460,700	2,460,700	62,900	12,800	20
	Grand Total	£42,911,046	1,491,516	41,419,500	41,419,500	43,573,302	1,703,802	41,869,500	41,869,500	1,296,100	1,746,100	21
	Net Decrease										£450,000	

NOTE.—Provision to the extent of £977,091 is included in the Estimates for 1907-1908 under Votes 8, 10 and 12, for the continuation of services hitherto provided for out of funds raised under the authority of the Naval Works Acts, 1895 to 1905.

France

The following are the principal promotions and appointments which have been made: Rear-Admirals—F. A. A. Leygue, M. J. C. Aubert, to Vice-Admiral. Capitaines de Vaisseau—J. Baëhme, J. C. L. Gaschard, to Rear-Admiral; J. M. Barnouin to "Jules Ferry." Capitaines de Frégate—A. H. De Spitz, F. J. De Bon, M. L. Delafont, E. F. Brion, A. A. Lefèvre, to be Capitaines de Vaisseau; A. J. Jézéquel to "Faucon"; M. H. Vesco to be Chief of the Staff to Rear-Admiral Kranz.—*Journal Officiel de la République Française.*

Promotion still runs slow in the French Navy: Vice-Admiral Leygue, promoted to that rank on the 16th ult., will be 61 in November, and has forty-five years' service, while Vice-Admiral Aubert is 59 and has forty-three years' service. Rear-Admiral Baëhme reaches that rank at the age of 58, after forty-one years' service, and Rear-Admiral Gaschard at the age of 57 and after forty years' service. Of the five new captains, the oldest, M. Brion, is 55, and has thirty-nine years' service, while M. De Bon, the youngest, is just 46, and has thirty years' service.

Rear-Admiral Krantz hoisted his flag on the 1st inst. at Toulon on board the new first-class armoured cruiser "Jules Ferry," in command of the cruiser division of the Mediterranean Fleet.

On the 15th inst. the new first-class battle-ship "Patrie" will join the Mediterranean Fleet; she is a sister-ship to the "République," also a recent addition, both ships being vessels of the six large battle-ships of the 1900 programme, the construction of which was so long delayed and hampered by M. Pellatan. The fleet will then be re-constituted as follows:—

1st Division.

First-class battle-ships—"Suffren" (flag-ship of Vice-Admiral Touchard, Commander-in-Chief), "Patrie," "République." (Speed 18 knots.)

2nd Division.

First-class battle-ships—"Saint Louis" (flag-ship of Rear-Admiral Manceron), "Gaulois," "Charlemagne." (Speed 18 knots.)

3rd Division.

First-class battle-ships—"Masséna" (flag-ship of Rear-Admiral Kiésel), "Jauréguiberry," "Bouvet." (Speed 17 knots.)

4th Division.

First-class battle-ships—"Brennus" (flag-ship of Rear-Admiral Germinet), "Charles Martel," "Carnot." (Speed 17 knots.)

The 1st and 2nd Divisions are in full commission for the whole year; the 3rd and 4th with reduced crews for nine months, and in full commission for three months.

In December next it is hoped that the "Justice," "Liberté," and "Démocratie," three other ships of the "République" class, will be ready to join the fleet, which will necessitate a further reorganisation. Next year, with the completion of the "Verité," the last of the battle-ships of the 1900 programme, there will be a powerful fleet of 16 battle-ships concentrated in the Mediterranean, to which must be added 12 first-class armoured cruisers, all quite modern, and a strong flotilla of new destroyers, which are now gradually replacing the older vessels.

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Steam Trials.—The new first-class armoured cruiser "Jules Ferry" has completed a four days' additional trial very satisfactorily. Leaving Toulon on the 21st May, she steamed for three days at a speed of 20 knots, with a coal consumption of 125 kg. (275 lbs.) per square metre of grate surface, the engines developing 17,000-I.H.P. During the next twenty-four hours the number of boilers alight was reduced to ten, when a speed of 17 knots was maintained, the relative coal consumption remaining the same. The three days' trial at 20 knots has been established since the cruisers of this class were laid down, but they have all come through their trials satisfactorily. The "Léon Gambetta," after a 24 hours' run at 19 knots, steamed for 2 hours at 22 knots, while the "Victor Hugo" realised a speed of 19.5 knots during the three days' run. The "Jules Ferry" has thus proved herself the best steamer of the three.

The new first-class battle-ship "Democratie" has commenced her trials off Brest, while the "Liberte" commissioned on the 15th ult. at St. Nazaire for the same purpose, and the "Justice," another of the same class, is preparing to commence her trials at Toulon.

M. Lockroy's Letters to the "Temps" on State of French Navy (continued). There are those who tell us that the best naval reform would be the reduction of the tonnage of our ships and the substitution of small craft for large battle-ships, and they suppose that this would involve economy. If we were to lose all common-sense and adopt this idea, we should have to make up for quality and power by quantity; thus a large number of small vessels of 300 tons might even cost more than the necessary number of 18,000-ton ships. And let anyone consider for a moment how many of these small craft we should have to build to be able to meet the English or even the German fleet.

The reform we require does not consist in a change of the type of vessel; it is our defective organisation that requires reforming. The question for us is: How is it that though we spend far more than our neighbours across the "Vosges," we produce much less? The fact is, that though many things have happened since then, we still keep up the organisation of the time of Louis XIV., and to this and the upkeep of five large arsenals which though formerly necessary are now no longer so, our failures are due. In former days, when the number of ships was so much larger, it was easy to find work for the arsenals all the year round, and it was natural, too, and even obligatory, before the introduction of steam, to use the building ports as ports for fitting out and commissioning our ships; but this is now no longer the case. Ships in these days cost so much that it has been found necessary to reduce their numbers, and thus a portion of the workmen we employ are continually in a condition of enforced idleness—a most expensive matter for the State.

The only remedy is that of the specialisation of the arsenals. We ought to select two wherein to concentrate all our productive power, one for building small vessels and the other for the largest class of ship. This reform has already been introduced to some extent, but it must be carried further. To make this specialisation a success all the cumbersome and costly machinery for commissioning and fitting out vessels, such as "service special, majorité générale, dépôt des équipages, bâtiments en réserve, etc.," should disappear from these two ports, for of what use is this organisation in ports where ships are only rarely commissioned, except to increase the general cost and exhaust the naval budget without any compensating advantage. According to a Parliamentary document, the price per ton for

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fitting out and commissioning ships at the following ports is: Brest, 141 francs; Lorient, 220 francs; Rochefort, 460 francs; and this enormous difference simply means that the ships so rarely commissioned at Lorient and Rochefort are charged with the general expenses at the same rate as is the case at ports where ships are constantly commissioning. Thus, a battle-ship like the "Patrie" would cost a million less at Brest to commission than at Lorient—not by any means a sum to be despised, representing as it does a good submarine or destroyer every other year. And so if we were to abolish the cost of the commissioning machinery where it is only a useless charge, and if in two ports all our efforts were devoted to new constructions, we should soon obtain a considerable return both from the military and financial point of view.

With these two building ports it would be easy for us at least to get together a homogeneous fleet of ships identical from truck to keelson; the same plans and designs, the same models would do for all; the preliminary expenses would be much less, and we should see progress made in a way that, notwithstanding all our efforts, we have been hitherto unable to realise. The time of building would be also much shortened, and we should not have the sight of unfinished ships dragging on indefinitely on the slips, thus effecting economy both of time and money.

As an example, take the case of the building of two vessels exactly alike, which by chance happen to have been given to Lorient and Toulon, namely, the "Dupetit Thouars" and "Guéydon." Toulon took eight years to build and complete the former, Lorient six years (or two years less) for the latter. The reason of this difference is that Toulon was burthened with the repairs of the active fleet, and only worked on the "Dupetit Thouars" when there was nothing else to do, whereas the building work at Lorient was not interfered with by other matters.

I do not conceal from myself the difficulties that would have to be faced should these reforms be adopted, and the worst difficulty of all would be the electoral difficulty. As soon as these changes, admitted by the best authorities to be necessary, are announced, all the political gentlemen of the places concerned will rise like one man; they will say we are condemning their towns to irremediable decadence, that it is doing injury to their pure Republican sentiments to take away from their ports the business of commissioning ships for the fleet. Nothing, however, can be less justified than these apprehensions; by specialising these arsenals we increase their importance, and are in reality making a present to the towns of infinitely greater value than the more or less honorary advantages which at present they derive from being fitting-out ports. Would it not be worth more to them to have a large industrial population and great and important factories and workshops of real use to the country?

The two ports we have in view are, as is well known, Rochefort and Lorient, and in none of the others could specialisation be so usefully adopted. Lorient constructs our best battle-ships and Rochefort our best small craft, and both of these ports are to-day no longer suitable for general naval purposes. Rochefort is isolated at the head of a gulf where battle squadrons would have no reason for risking themselves, and it is a curious historical fact that in all our naval wars very few actions have been fought south of Ushant. The money sunk in deepening the Charente has been money thrown away, as, notwithstanding the costly works undertaken, a destroyer cannot now ascend the river at low water, and medium size cruisers can only get up to the arsenal once a month at special tides. The Duke of Saint Simon, who seems to have foreseen our day, criticised, two centuries ago, the choice of Rochefort as an arsenal.

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As for Lorient, which is too close to Brest, if it is wished to utilise the roadstead, dredging works will be necessary, whose cost will frighten even the most prodigal of Ministers, and even then the harbour will barely accommodate six large battle-ships. The military rôle of these two ports is, therefore, much reduced; but though little suited to render much service in time of war, they seem admirably suited for doing great work in peace time. Well protected from attack, their situation is excellent as building yards, and they should attain much more important positions in the future than they have at present.

Let each arsenal do its appointed work, and France will be all the better guarded.—*Le Temps, Le Yacht, and Le Moniteur de la Flotte.*

United States.

The President on Navy Personnel.—President Roosevelt, on the 17th December, sent to the Congress the Bill to improve the efficiency of the commissioned *personnel* of the Navy, which was drafted in accordance with the recommendations made by the Board on *Personnel*, the report of which has already been published. Accompanying this Bill was a special message, which follows:—

“To the Senate and House of Representatives,—

“In my last three annual messages I have invited the attention of the Congress to the urgent necessity of such legislation as will cause officers of the line of the Navy to reach the grades of captain and rear-admiral at less advanced ages, and will give them more experience and training in the important duties of those grades. Under the present archaic system of promotion, without parallel in the Navy of any other first-class Power, captains are commissioned at the average age of fifty-six and rear-admirals at the average of sixty. This system is the result of a long continued prejudice in favour of a method of promotion by which all lieutenants in order of seniority pass through the several grades until they eventually become rear-admirals—a method which sacrifices the good of the Service to the interest of individual mediocrity. As a direct consequence of the existing method, naval officers obtain more than ample service in subordinate positions, but have a limited and inadequate experience as captains in command of battle-ships and as flag officers in charge of fleets and squadrons; that is, in the very positions of greatest responsibility, where experience, skill, and initiative are essential to efficiency. Moreover, they attain the position of a flag officer but a few months before they reach the retiring age, and have no opportunity to perfect themselves in the important duties of the high commands pertaining to such rank.

“History, modern and ancient, has invariably shown that an efficient *personnel* is the greatest factor toward an effective Navy. No matter how well equipped in other respects a Navy may be, though its fleet may be composed of powerful high-speed battle-ships, manœuvred by complicated tactics based upon the latest development of naval science, yet it is grievously handicapped if directed by admirals and captains who lack experience in their duties and who are hampered by long deprivation of independent action and responsibility. To oppose such a fleet to one equally good, led by officers more active and more experienced in their duties is to invite disaster.

“The following table gives the ages of the youngest captains and flag officers, with the average years in grade, in the Navies of Great Britain, France, Germany, Japan, and the United States:—

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	CAPTAINS.		SEA-GOING FLAG OFFICERS.	
	Age.	Average years in grade.	Age.	Average years in grade.
Great Britain ...	35	11.2	45	8.0
France ...	47	9.5	53	14.2
Germany ...	42	6.2	51	6.0
Japan ...	38	8.0	44	11.0
United States ...	55	4.5	59	1.5

"The facts shown in this table are startling, and earnest attention is invited to them.

"The Secretary of the Navy several months ago convened a Board of six representative line officers, with the Assistant Secretary of the Navy as president, to consider and recommend such changes in existing law relative to the commissioned *personnel* of the line of the Navy as would tend to promote efficiency and economy. The essential recommendations of the Board have been cordially approved by the Secretary. The Bill, herewith transmitted to the Congress, has been formulated by the Secretary, and is based, except in a few details, upon the recommendations of the Board. I earnestly recommend its early consideration. Should it be enacted into law it will cause officers on the sea-going list to reach the grade of captains at forty-eight and rear-admirals at fifty-five, and will assure their serving seven years in the grade of captain and seven years in the grade of rear-admiral, thus enabling them to become thoroughly skilful and efficient in these grades.

"The accompanying Bill also establishes the grade of vice-admiral. This grade has long existed in all other principal Navies of the world in order to obtain a selected grade of skilled Commanders-in-Chief. The Commander-in-Chief of a fleet, with one or more rear-admirals serving under him, is logically entitled to a higher rank than his subordinates, because of his greater authority and responsibility. On occasions of official importance, of International Council, or of combined naval action (as for instance the Boxer troubles in China), the interests of this great nation demand that our naval representative shall rank as the equal of the naval representatives of other Powers.

"Moreover, under the accompanying Bill, which is the result of recommendations made by a Board principally composed of naval officers, a large percentage of the officers are eliminated from the sea-going list, and never reach the grade of rear-admiral. When it is considered that the naval officers themselves recommend, in order to increase the efficiency of their service, that many be denied their existing privilege of reaching flag rank, it is only just to them that we should place their highest officers on a plane of equal rank with their colleagues of other nations, with whom they are so frequently brought in official contact.

"If the proposed plan of promotion is carried out, it will, as compared with existing law, make a saving of more than five million dollars during the next seven years. The principal part of this saving is made by stopping the voluntary retirement of young lieutenant-commanders with the rank and pay of commanders upon the retired list.

"I am firmly of the opinion that unless the present condition of the higher commissioned *personnel* is rectified by judicious legislation, the future of our Navy will be gravely compromised.

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"I forward herewith a letter of the Secretary of the Navy enclosing duplicate drafts of the proposed Bill. I also forward a copy of the report of the *Personnel* Board of the Navy.

"THEODORE ROOSEVELT.

"The White House

"17th December, 1906."

On the day this message went to Congress, Admiral George Dewey gave out an interview relative to the *Personnel* Bill, in which he said :—

"I feel deep concern over the existing condition of the commissioned *personnel* of the line of the Navy, and am gratified over the President's message. Under our present system all our officers are passed through the several grades until they finally reach that of rear-admiral, the consequence being that officers are commissioned commanders at the age of fifty, captains at fifty-five, rear-admirals at sixty, and are placed on the retired list at sixty-two.

"Under the present system, as a rule, captains and admirals are so old when they reach their grades and serve such short times in their grades that they cannot possibly obtain the experience that is essential to the full development of their skill and efficiency. The Naval Academy supplies the Navy with splendidly equipped young officers, unsurpassed by any in the world, and it is the fault of our system of promotion that they are not developed into unexcelled captains and flag officers. We have a most intelligent and efficient enlisted *personnel*; they can shoot straight and quick, and can be depended upon in the hour of need to thoroughly do their part. But in a fleet action between battle-ships, a skilled admiral, with experienced captains under him, will soon obtain the advantage of position, and will win the fight by superior tactical experience and skill.

"Admirals and captains are not born any more than skilled chess players are born. A fight between two modern fleets, with high-speed battle-ships for chessmen and the ocean for a board, is a most dramatic and intensely interesting game, upon which the fate of two nations may depend. There is no time for study, each player must be thoroughly prepared and experienced, each move must be made instantly, without hesitation, and a single mistake will lose the game. This marine chess game has been recently played in the Sea of Japan. Admiral Togo, a thoroughly trained and experienced flag officer, with skilful and experienced captains under him, handled his fleet with consummate skill, and won in less time than it takes to tell the story.

"Let us look facts squarely in the face, and not follow the example of the ostrich and bury our heads in the sand. The people want an efficient Navy, and they spend a hundred millions a year to have it, and I affirm solemnly, and without reservation, that the enactment of the excellent report of the *Personnel* Board into law, by which the Government would save about one million dollars each year and which would retain our most efficient officers on the sea-going list, and cause them to reach the grade of captain at forty-eight and rear-admiral at fifty-five, is vitally necessary to the fighting efficiency of the Navy. The Executive Department of the Government has submitted the facts and the remedy to Congress, and it is to be devoutly hoped that our law-makers, who alone can remedy the evil, will take immediate action."—*U.S. Army and Navy Journal*.

Naval Bureau of Ordnance.—In his annual report, Rear-Admiral Newton E. Mason, Chief of the Navy Bureau of Ordnance, tells us that it is anticipated that there will be in full or partial commission during the fiscal year 1908, twenty-four battle-ships, twelve first-class cruisers, sixty-six second and third-rate vessels, sixty torpedo-boats, and fifteen auxiliaries, making a total of 177 vessels. This represents an increase of thirty-eight vessels over those cared for and maintained during the present fiscal year. This requires an increase of 1,657,058 dollars in the appropriation. The erosion of heavy guns is so rapid that a reserve supply is required to take the place of those being relined. Future ships will be armed with a semi-automatic 3-inch gun of private manufacture, which has been satisfactorily tested. Extensive tests of gas-check pads are being made with the expectation of obtaining one having sufficient durability. Gas ejectors have given fair results, and are still in process of development to a more perfect form. It is proposed to provide for each intermediate gun, not using cartridge cases, a permanent single jet attached to the gun which may be worked automatically or at will, according to the necessities of the case. Such a jet has been tested with good results.

Two new designs of turret mount have been developed during the year, both for 12-inch guns. One type will be installed in the "New Hampshire" and the other in the "South Carolina" and "Michigan." Both types embody certain new features, which will operate to increase the rapidity of fire. The design adopted for the "South Carolina" and "Michigan" represents a marked departure from previous designs. For guns of 7-inch and smaller calibre, no new designs of mounts have been developed, though a novel type of broadside mount for guns of intermediate calibres is now under consideration. A special appropriation for completing this work is urgently needed. The new sights are not excelled, if equalled, by any other in the world. Telescopic sights for all guns above 3-inch calibre are being furnished to all vessels so far as funds will allow. A type showing a marked departure from existing models is to be tried on the "South Carolina" and "Michigan," and another is in a preliminary stage of design. Improvements in electrical appliances designed to avoid a repetition of the deplorable accident on the "Kearsarge" are being put into effect on all vessels as fast as the appropriations will allow.

The "New York" is to be rearmed, and the turrets and sights of the "Massachusetts" and "Oregon" remodelled. The ancient batteries of the "Iowa," "Brooklyn," "Olympia," "Monterey," and "Monadnock" should be subjected to similar treatment to render these vessels efficient. The vessels of the "Arkansas" class need new sights. Each year of delay in making appropriation for issuing to the Navy the latest type of rifles and machine guns will result in material increase of the ultimate cost. It is, therefore, earnestly recommended that the necessary amount be asked for. The issue of the machine for training men in the use of the Service rifles results in increased efficiency and a saving of about 500 dollars a year on each vessel. A further saving will result from the adoption of an electrical dotter devised by an officer of the Navy in place of the Morris tube, to which serious objections are urged.

The methods of purifying our smokeless powder have been improved and its uniformity increased. Of the 3,500,000 lbs. of Brown prismatic powder which occupies much needed room in the magazines, 850,000 lbs. have been transferred to the Army. The ballistic efficiency of large

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calibre projectiles is being improved, and the improved bands give smooth flights of projectiles even when fired from guns that are considerably eroded. The older types of fuses are being rapidly withdrawn from service. Experiments are still under way pertaining to improvements in ignition in cartridge cases and to a more satisfactory material for cartridge bags.

It is considered of the utmost importance that in the organisation of the fleet there should be two vessels of considerable size, one on the Atlantic and one on the Pacific coast, devoted exclusively to the transportation of ammunition. Ultimately there should be one of these vessels with each fleet. It is believed that the delivery of armour contracted for will be completed during the calendar year, and the small demands for armour in the future may result in seriously reducing the resources of the country for this special material, which now approximate 30,000 tons a year. The greatly increased severity in the ballistic test has been fully met by the manufacturers. There has been a reduction of 52 dollars per ton in the price of armour. A new system of fire control is to be tested in one battle-ship, and a range-finder of American design and manufacture. Torpedo practice during the year has been very satisfactory. The officers and men are becoming highly proficient in handling this important weapon. This is directly due to the wise policy of including in the annual target practice records the scores made in torpedo practice. Satisfactory progress has been made with a new type of submerged torpedo-tube. Compressors and accumulators which meet the high requirements are to be furnished to ships fitted with the new torpedoes. The mine outfits of the battle-ships and armoured cruisers are complete, and the torpedo station is prepared to furnish the mine outfits to the new ships as they go into commission. Estimates are submitted for 500 reserve mines in addition to those carried by the ships. Experiments with two submarines stationed at the torpedo station have secured data of value in future designing.

More officers are needed in the bureau as the number of vessels increases. Uniform practice in inspection has resulted from the employment as a general inspector of a naval officer of rank and technical experience. The study of the interior ballistics of smokeless powder by a special Board has added materially to our knowledge of projectiles, fuses, high explosives, and kindred subjects. It is expected that the labours of this Board will result in the development of a fuse which will fully meet the high requirements for a fuse to be used with high explosive shells. As regards the strength of material, the new alloys give promise of remarkable results, and two experimental guns now under construction are confidently expected to show a strength much beyond that of any guns heretofore constructed.

There should be some definite provision of law regarding the securing of patents by the Government of inventions by officers. It is recommended that authority be given to take out patents in the name of the Government, to pay the cost of the application, and to give the inventor a satisfactory compensation for his services.

An auxiliary vessel for use as a machine shop and store vessel with the fleet is recommended. Results have fully confirmed the wisdom of providing special instruction in ordnance for officers. Six have completed the course and been assigned to duty, and seven are pursuing the course. The instruction of 164 seamen gunners has been completed during the year. The course of instruction has been changed and extended to forty-one weeks. The close relations with the Ordnance Department of

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the Army have continued with advantage to both branches of the Service.

Efforts will be continued to secure a uniformity in *matériel* between Army and Navy. Additional clerks are needed by the bureau. The work of the Naval Gun Factory has continued to increase in efficiency under the present management, and the delays in delivery of ordnance *matériel* for installation on ships building are rapidly decreasing. Approximately 10,000 dollars a year is saved by the new fuel oil burning system. The output of the factory has been increased nearly fifty per cent. during the year, the expenses have been reduced enormously, and the estimated time of completion of *matériel* has been, in some instances, reduced nearly one-half.

At the Naval Proving Ground 464 guns of all calibres were proved and 111 carriages and mounts tested, this being an increase of 190 guns over that of any previous year, and an increase of fourteen in carriages and mounts over that of the previous fiscal year. A 6-inch 30-calibre gun that had been relined was fired twenty-one times, and is in excellent condition, which is considered an indication that the system of relining which has been adopted will prove satisfactory.

Experiments on different metals elicited the salient facts that a nitrocellulose powder stands high in non-erosive qualities, and that it is useless to attempt to avoid erosion altogether by the use of a particular metal for the bore of the gun.

The Indian Head Smokeless Powder Factory turned out 1,001,699 lbs. of powder. At the Newport torpedo station should be immediately established a plant for the repair and manufacture of automobile torpedoes.—*U.S. Army and Navy Journal*.

MILITARY NOTES.

The following are the principal appointments which have been made:—
Generals—Right Hon. T. W. Lord Grenfell, G.C.B., G.C.M.G., from the 2nd Life Guards, to be Colonel of the 1st Life Guards.

Lieut.-Generals—Sir C. J. Burnett, K.C.B., to be General Officer Commanding-in-Chief the Western Command. D. M. B. H. Earl of Dundonald, C.V.O., C.B., to be Colonel of the 2nd Life Guards.

Major-Generals—H. C. Lewes to be Colonel Commandant of the Royal Regiment of Artillery. H. J. Scobell, C.B., to be Inspector of Cavalry. H. E. Belfield, C.B., D.S.O., to Command the 4th Division.

Colonels—C. E. Heath, Brigadier-General in Charge of Administration, Aldershot Army Corps, to be Major-General. F. H. Kelly to be a Brigade Commander, and is granted the temporary rank of Brigadier-General whilst so employed. C. H. Westmorland, I.A., to be a Colonel on the Staff. E. C. W. Mackenzie-Kennedy, I.A., to be an A.A.G. A. W. Collard to be an Assistant-Director of Supplies and Transport. E. D. J. O'Brien, from h.p., to be an Assistant-Director of Remounts. G. P. Wyndham to be a Military Attaché. T. S. Baldock, C.B., from h.p., to be Commandant, School of Gunnery, for Royal Horse and Royal Field Artillery. W. R. Robertson, C.B., D.S.O., from h.p., to be an A.Q.M.G. C. C. Monro, C.B., from h.p., to be a Brigadier-General to Command an Infantry Brigade. Hon. A. H. Henniker-Major, C.B., from h.p., to be a Brigadier-General to Command an Infantry Brigade.

Home

Belgium.

The Army.—Belgium is the only Continental European nation which has not adopted compulsory personal military service.

The Belgian Army is recruited, as was formerly the French, by means of drawing lots with the option of substitution. The substitutes are furnished by the State. The period of service is fixed at 8 years with the colours and 5 years with the Reserve; but the men are sent on furlough after 28 months' or 4 years' service, according to the arm to which they belong, and are not obliged to come up further for any drill periods.

The annual contingent thus enrolled is 12,800 men for a population of 7,077,000, or .18 per cent. only of the population; in France it amounts to nearly one-half per cent.

The Army consists of 4 divisions, which correspond to the 4 territorial districts, the headquarters of which are at Gand, Anvers, Liège, and Brussels. The composition of the various branches of the service is as follows:—

Infantry.—14 infantry regiments of 3 Regular, 1 Reserve, and 2 fortress battalions each. Each battalion consists of 4 companies; there is, in addition, 1 dépôt company per regiment.

3 Chasseur regiments of 3 Regular, 1 Reserve, and 2 fortress battalions; 1 grenadier regiment of the same composition; 1 carabinier regiment of 4 Regular, 1 Reserve, and 3 fortress battalions.

Cavalry.—The cavalry regiments have all 6 squadrons, one of which is a dépôt squadron. It consists of 2 regiments of Guides, 2 regiments of mounted Chasseurs, and 4 lancer regiments.

Artillery.—The artillery is composed of 4 regiments, consisting of 30 field, 4 horse, 6 reserve, and 4 dépôt batteries. The fortress artillery is organised according to the position fortified and grouped, in each of these, by sector and by battalion. Anvers has 30 Regular and 20 Reserve batteries, grouped into 8 battalions; Liège has 12 Regular and 4 Reserve batteries grouped into 4 battalions; Namur has 9 Regular and 3 Reserve batteries, grouped into 3 battalions. Altogether 15 fortress artillery battalions, consisting of 51 Regular and 27 Reserve batteries.

Special Troops.—1 regiment of engineers of 4 Regular and 2 Reserve battalions, and 1 dépôt company; 1 transport battalion of 7 Regular companies and 1 dépôt company; 3 special engineer companies (telegraph, pontoon, and railway); 3 special artillery companies.

Armament.—The infantry is armed with the Mauser rifle, model 1889, calibre 7.65-mm. Up to the present the Regular battalions only have the Mauser; it is about to be issued, too, to the fortress battalions. The field artillery has shielded Q.F. Krupp guns, calibre 75 mm.

The peace effective is 3,471 officers, 41,800 men, and 204 guns. This effective was about 48,000 men before 1902, the year when the Belgian Government raised a number of reserve and fortress units to increase the war strength, but at reduced peace strength, so as to keep the Budget to about 54,000,000 francs. The mobilised army consist of 1 cavalry division and 4 infantry divisions, the garrisons of the fortified places, Anvers, Liège, Namur, and Huy, the dépôts of the Gendarmerie. Altogether the Belgian Army can put 170,000 men in the field.

This effective, a difficult maximum to attain in reality, would, according to most Belgian officers, be absolutely inadequate, especially since the construction of the new fortifications of Liège and Namur. According to them the territorial defence of Belgium would require 185,000 men, 90,000 of whom would form the garrisons of the fortified places. For that it would be necessary to increase the annual contingent from 12,800

to 16,000 men, and to form a national reserve, of which there is none at present. Belgium.

Mention should be made of the Garde Civique, which is under the Minister of the Interior, and is similar to the old French Garde Nationale. It consists of all men from the ages of 21 to 50, who do not belong to the Regular Army. It includes:—1st, the Regular Garde Civique in the towns and fortified places; it is equipped and assembled for a certain amount of drills, and its strength is about 37,000 men; 2nd, the Sedentary Garde Civique, which is neither armed nor trained, and whose strength is about 90,000 men.

Defensive System of Belgium.—General Langlois concludes in the following words his luminous study of the Netherlands-Belgian *entente*:—

"The defensive system of Belgium has to satisfy two different necessities, viz.: the maintenance of her neutrality, and her own defence. The positions of Liège, Huy, and Namur answer for the first eventuality, for they bar the valley of the Meuse, the natural road which has always been followed by armies. For her own defence, Belgium has established the immense entrenched camp of Anvers, for which Parliament quite recently voted enormous credits. The position of Anvers is meant to serve as a refuge for the field army, as a redoubt for the defence, and as the seat of Government should the country be invaded. Anvers thus fulfils a similar rôle to that of the fortified Netherlands' position, viz.: to allow England to despatch help, with the following essential differences: the entrenched camp, 90 kilometres distant from the sea, can be invested and see its communication with England cut; the Government, blockaded in Anvers and separated from the rest of the country, would no longer have any power, and would merely impede the military governor; finally, a place containing a strong garrison and very numerous population, incapable of being revictualled, would infallibly fall in a short time, owing to want of food. On the other hand, the normal effective of the war garrisons of the Meuse fortifications are totally inadequate to the great extent of front to be defended."—*Armée et Marine*.

The Modern Chinese Army.—Captain Charles T. Boyd, 10th Cavalry, U.S.A., contributes to the Metropolitan Magazine an account of his observations of the Chinese Army, illustrating his remarks with snapshot photographs taken by him. According to the statement of Yuam Shi Kai, Governor of the Province of Pechili, China is only about fifty years behind the nations of the West, and is hastening to catch up. China.

Captain Boyd first visited the troops of General Ma, which necessitated a journey of twelve days (420 miles) in a springless Pekin cart. General Ma is described as a man of sixty-seven, who looks to be no more than fifty. His moustache is iron grey, but his hair is still black. He is of large build, with a strong, intellectual face. Energy and force are written in his features, as well as in the clear black of his piercing eyes. His methods of discipline are indicated by the fact that when the friends of an officer who had been sentenced to be beheaded for absence without leave were pleading for his life, Ma took up the axe, and, with his own hand, cut off the head of the culprit.

Describing a parade he saw, Captain Boyd tells us that the ranks face each other, and were drilled alternately, the commands being given by word of mouth with force and snap, the movements in precision and time being hard to excel. There were no intervals between companies

China.

or regiments; the men stood elbow to elbow. All the marching was done with the goose step, the free arm swinging far to the front. The men in the lines were more than average size.

Everywhere one could see the effect and the result of the German instruction. No foreign instructors were seen, and it was asserted that none were with the troops; but there were manifest evidences of Japanese instruction. Captain Boyd says: "I saw one Japanese at Pao-ting-fou in Chinese costume who gave evidence of being an instructor, though he was not seen with the troops. There are Japanese instructors in Southern China. In the Yangtse provinces the instructors are principally German."

At a review given by General Yu, who was in immediate command of the troops, all the commands were given by bugle. At the proper command the lines formed columns of platoons, the band leading, and in this formation passed in review. In re-forming line from mass the movements were not made by wheeling and moving in sets of fours; to the contrary, each company moved out in fan shape, as do our skirmishers, using short mincing steps instead of our "double time" or run. Captain Boyd says: "The most interesting exercise, though, was the formation for attack. A line of dense masses was formed, and the leading element in each mass moved forward and halted. Presently, platoons detached themselves from these elements and moved to the front in columns of twos. Each platoon then halted, deployed into line in close order and opened fire. Squads were then formed from these lines, and moved out also in columns of twos; then they deployed into thin lines something like our skirmishers and opened fire. Now the skirmishers extended clear across the field. In support was a line of platoons; in reserve was the line of masses. The skirmishers continued to advance, each squad first moving to its centre and forming column of twos, then opening out into skirmish order to fire. Every advance was made in this way, with the object, no doubt, of reducing the extent of the exposed front. (I have been informed that the Japanese used this same method when moving forward to attack the Russian lines. Our method is to advance in thin lines rather than in thin columns.)

"During the advance the line of skirmishers would kneel upon halting, and, finally, as the exercise progressed, would lie down. At each halt the motions of firing were gone through, but no cartridges of any kind were used. Instead, each skirmisher, as he fired, made a whistling sound in imitation of the whistling of a bullet. When we heard the whole line doing this, it did give us the impression of being under fire, with the bullets whistling above our heads. The troops went through a drill something like our bayonet drill, did the manual, with facings and goose steps, kneeling, lay down, and did the firing drill, the band giving in each case the signal and the time. For precision and accuracy this drill could hardly be excelled.

"Moving about among the troops while the drill was in progress, one could see the effect of the constant drilling and exercising to which these soldiers are accustomed. They were all healthy looking, with clear eyes and hard muscles; their movements were easy and natural; they seemed strong and ready. The discipline was perfect.

"About every soldier's rifle was a red cloth, covering the breech mechanism, and in every muzzle was a rod from which protruded a red tassel. These precautions were taken to protect the rifles from dust and moisture."

In the artillery there were six horses to each gun, except a large 4-inch gun, which had eight, and mountain guns with two each. The breech and the barrel of each cannon were covered with a large piece of red cloth closely wrapped and tied. Everything about the guns was scrupulously clean.

Captain Boyd says: "As far as the men were concerned, the drill was excellent, but the horses seemed very small for the large wheeled pieces. The horses that were not ridden were led by the cannoneers. The battery went into action so well that I asked to have the movement repeated. To my surprise the whole programme was repeated from the beginning simply to do this one movement. This seemed to indicate that it was only by programme that the artillery could drill. In any case, this left a very unfavourable impression upon our minds.

"General Cheng told us that in the drilling of recruits each man was required to carry sand in his knapsack. For the first day he carried two ounces; on each succeeding day he increased this amount by two ounces, until at last he was carrying sixteen pounds. On this particular day the recruits were carrying twelve ounces. The general also informed us that these men could run in the way we saw them running for ten consecutive hours, and arrive at the end of that time in a fit condition for fighting. Their 'double time' is less in time and length of step than our own; it is like a running walk, though somewhat faster. It is said that the Italian troops practise a similar gait, and can run great distances."

During an attack upon an imaginary enemy, each time the range was given the corporals ran crouching along the line inspecting the sights in their squads to see that the men had fixed their sights. "The right platoons each time advanced the line in rushing forward, the left platoons only coming up as far as the line on which the right for the moment rested. This was true even after the skirmish line had absorbed all the supports. The skirmish line was reinforced by squads from the supports, and these by squads from the platoons in reserve. The commands were by word of mouth, repeated by the bugle. Whenever the line kneeled or lay down, the supports did likewise, the officers also taking cover. Finally, the reserves being absorbed, rapid fire was delivered, bayonets were fixed, and the men advanced at a double time to the charge. The bugle sounded three times, each being a signal to charge. After each signal the entire line charged, cheering, delivering not one, but three charges in one. The line was halted at the edge of the plain and the skirmishers assembled. I then inspected the companies and found no one breathing heavily, nor even one with his mouth open to assist in breathing. Their charging across the plain seemed to be no more than ordinary exercise. The troops then moved off at the goose step, in order, with delightful swing."

Observations extending over several months lead Captain Boyd to the conclusion that these things are necessary to make first-class soldiers of the Chinese: First, European dress; second, honest and efficient officers; third, something to fight for, which means that the soldiers will be united, that they will have the will and determination to fight, that they will have a definite object for which to sacrifice life. When these conditions are fulfilled, China will be a Power; until then she is a temptation to any nation seeking an extension of territory.—*U.S. Army and Navy Journal*.

France.

Autumn Manœuvres for 1907.—A circular from the War Minister, dated the 18th December last, lays down that the manœuvres for 1907 should have for their sole object the practical instruction of the troops, and that all other ideas must be set aside. They will take place, from the 5th to the 14th September, in the South-West of France, under the following conditions:—

I.—Army Manœuvres.

Army manœuvres will be carried out in the south-west under the director of General Hagron, Member of the *Conseil Supérieur de Guerre*. These manœuvres will last for 10 days, not including the time devoted to concentration and dislocation. The XIIth and XVIIIth Army Corps and the 3rd Colonial Infantry Brigade will take part in them.

The artillery will be completed for the XIIth Army Corps by 2 squadrons from the 16th (Poitiers) Brigade and by a brigade division of the 12th Artillery Brigade; for the XVIIIth Army Corps by a brigade division of the 16th and by one from the 17th Artillery Brigades.

The cavalry will be reinforced by 2 squadrons of the 16th Cavalry Brigade for the XIIth Army Corps, and by 2 squadrons from the 17th Cavalry Brigade for the XVIIIth Army Corps.

II.—Army Corps Manœuvres.

Army Corps manœuvres will be carried out in the 1st Army Corps, under the direction of General Michel, and in the VIIth Army Corps, under the direction of General Lacroix. They will last for 10 days, not including the time devoted to concentration and dislocation. The following troops will be attached to the 1st Army Corps for the manœuvres:—

A mixed infantry division and the 5th Cavalry Division. The mixed infantry division will be placed under the orders of the general commanding the 1st Colonial Infantry Division. It will consist of: The 5th Colonial Infantry Brigade; the group of Zouave battalions in Paris; the 138th (Saint Germain) Battalion; a divisional artillery made up from the 19th Artillery Brigade; a company of divisional engineers, furnished by the 3rd Engineer Regiment.

The artillery of the 1st Army Corps will be completed by 2 brigade divisions, one of which will be furnished by the 2nd, and the other by the 19th Artillery Brigade.

The Cavalry will be reinforced by 3 squadrons of the 2nd Cavalry Brigade.

The VIIth Army Corps will be reinforced by the 8th Cavalry Division and its artillery will be completed by 2 brigade divisions, which will be formed, one by the 6th and the other by the 20th Artillery Brigade.

III.—Division and Brigade Manœuvres.

Division manœuvres, lasting for 14 days, including going and returning, will take place in the Vth, VIth, IXth, Xth, XIth, XIVth, and XXth Army Corps.

Brigade manœuvres, lasting for 12 days, including going and returning, will be carried out in the IInd, IIIrd, IVth, VIIIth, XIIth, XVth, XVIth, and XVIIth Army Corps. At the same time, the two brigades of the 7th Division of the IVth Army Corps will not participate in the manœuvres. The troops stationed in Corsica will carry out manœuvres lasting for 12 days, including going and returning.

IV.—Camps of Instruction.

France.

Generals commanding the 1st, IInd, VIth, VIIth, Xth, XIth, XIIth, XIIIth, XVIth, and XXth Army Corps, in the district of or in close proximity to the camps of instruction of Sissonne, Châlons, Le Valdahon, Coëtquidan, La Courtine, Larzac, and Mailly, are authorised to base their estimates on the whole of the credits at their disposal for autumn and garrison manœuvres, as well as those for the execution of infantry musketry practices, for the preparation of combined evolutions in the camps, for the carrying out of musketry practices, and for the organisation of autumn and garrison manœuvres, to the best instructional advantages of the troops under their command. In addition, combined evolutions with musketry will be carried out by the 6th Division of the IIIrd Army Corps and by the 7th Division of the IVth Army Corps at the Châlons camp, and by the 10th Division of the Vth Army Corps at the Mailly camp.

V.—Cavalry Manœuvres.

The following will be carried out :—

1. Under General Burnez, 2 combined cavalry manœuvres, the first by the 2nd and 8th, and the second by the 6th and 7th Cavalry Divisions.
2. Under General Trémeau, commanding the VIth Army Corps, 2 combined cavalry manœuvres, the first by the 1st and 5th and the second by the 3rd and 4th Cavalry Divisions.

These manœuvres will each last for 8 days, including going and returning.

Cavalry brigades of army corps will carry out evolutions and manœuvres lasting for 10 days, including going and returning. These brigades or their units will, in addition, take part in the autumn manœuvres in their respective army corps.

VI.—Various Manœuvres.

Special manœuvres will take place in the Vosges, the Alps, Algeria, Tunis, and in certain places in the east; they will be the subject of special instructions.

VII.—Colonial Troops.

The 2nd and 5th Colonial Infantry Brigades will take part in the Army and army corps manœuvres under the conditions mentioned above. The other Colonial troops will participate, according to the remaining available credits, in the different manœuvres of the Home troops in the districts of the army corps where they are respectively stationed. Expenses of all kind resulting from the participation of Colonial troops in the autumn manœuvres, especially those with regard to railway transport and the hiring of extra horses, will be charged to the credits provided in the 2nd section of the Budget.

VIII.—General Dispositions.

Under reserve of special instructions which will be given by the War Minister, these manœuvres will be organised and determined in accordance with the dispositions of the General Manœuvres Instructions of the 18th February, 1895, revised on the 1st January, 1904. At the same time, in corps at the higher effective, the manœuvre units may be made up, with the aid of reservists, to 200 men per infantry company, to 170 men per engineer company, and, according to the horse resources, up to 150 men per squadron.

France

IX.—*Special Dispositions.*

The infantry regiments will march to the manœuvres with their 4 battalions, with the exception of those in which no company of the 4th Battalion has been normally formed, and those of the VIth, VIIth, XIVth, XVth, and XXth Army Corps, which will consist of 3 battalions. The Chasseur battalions and 1 battalion per infantry regiment will be provided with a two-horsed ammunition wagon. Units provided with machine guns will take them to the manœuvres.

The 20th Foot Chasseur Battalion will manœuvre with the VIth Army Corps. The other Chasseur battalions will participate in the manœuvres of their respective army corps.

The group of the Sathonay Zouave battalions, the units of the Lyons District Brigade quartered in that town, 3 Alpine battalions of the XIVth Army Corps, and 2 Alpine battalions of the XVth Army Corps will take part in the manœuvres. These Alpine battalions will be selected by the generals commanding the army corps, and will be made up to 4 companies.

The 159th Regiment and the battalions of the Lyons District Brigade quartered in the Alps will not take part in the manœuvres.

Ammunition.—A later supplementary circular lays down the allowance of blank ammunition for the 1907 manœuvres.—*Revue du Cercle Militaire.*

Germany.

The Grand Manœuvres in 1907.—A Cabinet order of the 14th February last contains the following regulations with regard to the Imperial Grand Manœuvres for this year, which will take place on the 9th, 10th, and 11th September in the Valley of the Weser; the total effective of the troops taking part in them will amount to about 60,000 men:—

The VIIth (Münster) and Xth (Hanover) Army Corps will manœuvre against one another in the presence of the Emperor.

Four cavalry divisions will be formed in the Ist, VIIth, VIIIth, and Xth Army Corps, viz.:—

The A Division (VIIth Army Corps) by the 14th, 16th, and 21st Cavalry Brigades, from the VIIth, VIIIth, and XVIIIth Army Corps respectively, the 2nd Machine Gun Detachment from the XVth Army Corps, the Horse Artillery Brigade Division of the 11th Field Artillery Regiment (XIth Army Corps), and a Cavalry Pioneer Detachment of the VIIth Army Corps.

The B Division (Xth Army Corps) by the 5th, 17th, and 19th Cavalry Brigades, from the IIIrd, IXth, and Xth Army Corps respectively, the 11th Machine Gun Detachment from the XVIth Army Corps, the Horse Artillery Brigade Division of the 10th Field Artillery Regiment (Xth Army Corps), and a Cavalry Pioneer Detachment of the Xth Army Corps.

The C Division (Ist Army Corps) by the three Cavalry Brigades (1st, 2nd and 37th) of the Ist Army Corps, the 5th and 6th Machine Gun Detachments, and the Horse Artillery Brigade Division of the 1st Field Artillery Regiment, all from the same Army Corps.

The D Division (VIIIth Army Corps) by the 29th, 30th, and 33rd Cavalry Brigades, from the XIVth, XVth, and XVIth Army Corps respectively, and the Horse Artillery Brigade Division of the 8th Field Artillery Regiment (VIIIth Army Corps).

The cavalry brigades will all consist of two regiments.

In addition, the Guards Cavalry Division will be thus constituted for the manœuvres: The 1st, 2nd, and 3rd Guards Cavalry Brigades, the two Guards Machine Gun Detachments, and a Horse Artillery Brigade Division of the 1st Guards Field Artillery Regiment.

The Guards and the B, C, and D Cavalry Divisions will carry out special manœuvres at the camps of instruction of Alten-Grabow, Munster, Arys, and Elsenborn. Special instructions will be issued for the assembly of the A Division, as well as for the participation of the troops of the B Division in the brigade and division manœuvres of the Xth Army Corps. The A and B Divisions will each be allowed a grant of 400 marks for the special exercises of the pioneer detachments allotted to them.

Combined pioneer manœuvres will take place in the Frankfort-on-the-Oder district, as well as the Ulm and Coblenz. At Frankfort one battalion will operate along the line of the Oder between Frankfort and Kustrin, and round a fortified position near Drossen. The manœuvres will last from the 5th to the 10th August. The Guards battalion and the 2nd Pioneer battalion will take part in them. The manœuvres at Ulm will be from the 26th to the 31st August; the 13th (Württemberg), the 14th (Baden) and the 19th (Alsace) Battalions will take part in them. At Coblenz the manœuvres will take place between the 2nd and 8th August, and will consist of a passage of the Rhine and an attack on a fortified position; the 8th and 11th (Hesse) Battalions will take part in them. A proper proportion of troops of all arms belonging to the army corps in whose district the manœuvres will be held will also participate in them.

Siege operations will be carried out at Posen under the general officer commanding the Vth Army Corps. Attacks on fortified positions with the participation of heavy field artillery will not take place this year.

The Guards Transport Battalion, as well as those of the IInd, IIIRD, IVth, VIIIth, IXth, XIth, XIVth, XVth, XVIth, and XVIIIth Army Corps, will form subsistence convoys, and supply the transport *personnel* for the two army corps which will take part in the Imperial Manœuvres.

Cavalry instruction rides will take place in the 1st, IInd, IIIRD, Vth, VIIIth, XIth, XIVth, and XVIth Army Corps. A grant of from 1,180 to 2,350 marks is granted for these rides.

The period for the manœuvres for those army corps which do not take part in the Imperial Manœuvres will be fixed, taking into account, as far as possible, the work of the harvest. An endeavour will be made to limit the damage by the selection of the ground and the nature of the exercises. The dismounted branches of the Service should be back in their garrisons by the 30th September at the latest.—*Revue Militaire des Armées Étrangères.*

Recruiting Statistics for 1905.—The official report of the recruiting operations in 1905, presented to the Reichstag on the 9th November, 1906, shows the following results:—

The number of young men on whom the Revision Boards had to decide in 1905 amounted to 1,105,816, and was composed as follows:—

Young men of 20, to be examined for the first time	500,047
Young men of 21	320,949
Young men of 22	246,719
Older	38,101

Total 1,105,816

Since 1903 the official report gives no account of the numbers of those who failed to join and of those who could not be found, judging by previous years the number may be put down at 125,000.

Germany. The young men on the recruiting registers for 1905 and preceding years were distributed as follows :—

Not found and failing to join	...	...	...	125,000
Debarred from service...	...	...	...	976
Unfit for service	...	...	...	34,172
Put back...	...	...	...	501,515
Men of 20 or upwards who came out as Volunteers	...	...	...	} 30,812 ¹
before being called out	...	...	...
Passed fit for service	...	...	...	413,341
Total	...	...	...	1,105,816

The 413,341 young men passed fit for service were posted as follows :—

Landsturm—1st Levy.

1. On account of their Civil positions	...	439	} 111,187
2. In excess ²	...	8	
3. For various reasons	...	110,740	

Erstatz—Reserve of Land Forces.

1. On account of Civil positions	...	7,852	} 81,417
2. In excess ²	...	1,021	
3. For various reasons	...	72,544	

Erstatz—Reserve of Navy.

1. On account of Civil positions	...	79	} 1,647
2. In excess ²	...	2	
3. For various reasons	...	1,566	

Land Forces.

1. In the combatant branches	...	206,876 ³	} 219,090
2. In the non-combatant branches	...	3,457	

Navy.

1. Young men from inland	...	5,536	} 3,221
2. Young men from maritime or semi-maritime population	...	3,221	

Total ... 413,341

As regards age, the young men enrolled in the Army and Navy were thus distributed :—

20 years old	...	103,513
21 years old	...	52,094
22 years old	...	61,512
Older	...	1,971

Total ... 219,090

¹ 29,318 in the land forces and 1,494 in the Navy.

² Young men classified as in excess, *überzählig*, are liable to be called to the colours in case of deficiency in the men posted to the land and Naval forces.

³ 2,521 for one year in the transport; 190,927 for two years with troops other than cavalry and horse artillery; 13,428 for three years (cavalry and horse artillery).

The number of voluntary enlistments during the year 1905 was 51,547 in the Army and 3,381 in the Navy. These enlistments were distributed as follows:—

Army.

Voluntary enlistments for one year:—

Before the age of 20	1,340	10,464
At the age of 20... ..	9,124	

Instructors and candidates for the duties of public teachers not included in the above category.

Before the age of 20	10	814
At the age of 20	804	

Various Categories

Before the age of 20	20,879	40,269
At the age of 20	19,390	

Total... .. 51,547

Navy.

Voluntary enlistments for 1 year	590
Various categories	2,791

Total 3,381

As regards more especially the land forces, the total number of young men who entered the Regular Army in 1904 was as follows:—

Men enrolled... ..	210,383
Men of 20 years and older who anticipated the } calling to the colours by voluntary enlistment }	29,818
Voluntary enlistments before the age of 20	22,229
Total	261,880

An examination of the report shows that the proportion of young men fit for service, which, as a general rule, has been on the decrease for several years, did not vary greatly since the preceding year. It was 53·7 per cent. in 1904, and is 53·6 per cent. for 1905.—*Revue Militaire des Armées Etrangères.*

The Army.—The first scheme for obligatory military service, with increase of the peace effective up to 100,000 men, and the creation of a reserve for mobilisation, was laid before the States General in 1889, but it was not until 1891 that the principle of obligatory military service was adopted. It was, however, merely the principle, and no increase was made in the annual contingent of 11,000 men until 1902. Since that year all the necessary changes have been gradually introduced, and the Netherlands, at the present time, possess a well-trained, properly officered, and easily mobilised Army.

Nether-
lands.

Recruiting of Rank and File.—Voluntary enlistment with personal general service with numerous cases of exemption, such as ministers of religion, only sons, half the brothers of the same family, etc. The contingent organised for every year is laid down as 17,500 men, divided into two portions, viz.: 12,300 men are incorporated for 8 months in the dismounted branches and for 18 months in the mounted branches

* 30,585 of whom were for two and 9,684 for three years.

Nether-lands.

of the Service; 5,200 men receive a preparatory military training in civil life, and are only obliged to serve for 4 months in the Regular troops. All remain for 8 years in the *Regular Army or Militia*, and are liable, after discharge, to be called out for 2 or 3 drill periods, lasting altogether for 12 weeks in the dismounted, and for 1 single period of 6 weeks in the mounted branches of the Service. After the 8 years' enrolment in the Regular Army or Militia the men of the dismounted branches only are drafted for 7 years into the *Landweeer*, where they may go through voluntary training courses and optional musketry practices. They are then immediately drafted into the *Landstorm*. Before 1902 the enrolled contingent of the *Regular Army or Militia* was only 11,000 men; the *Landweeer* did not exist, and all able-bodied citizens from 25 to 35 years of age belonged to the *Schütterig*—a species of Communal Guard, divided into the active and the sedentary *Schütterig*. A delay of 5 years was allowed for the transformation of the *Schütterig* into the *Landweeer*, and all the officers and non-commissioned officers of the former were admitted into the latter by voluntary engagement. The *Landstorm* takes the place of the old sedentary *Schütterig*.

Recruiting of Officers.—The law of the 21st July, 1890, on Army military training, altered the organisation of the military schools. Officers for all branches of the Service come from the Royal Military Academy at Breda, and in addition, as regards the infantry and administrative service only, from the higher course established at Kampen. The students of the Royal Military Academy at Breda come either from the Cadet School or direct from the civilian population; those of the higher course are drawn from an Infantry Army Course, to which non-commissioned officers are admitted. This duality of origin exists only for the infantry. The Higher War School, to which officers of less than 5 years' service are admitted, is at the Hague. It is divided into two sections: the one gives officers a higher military instruction as a preparation for chief command and for service on the Staff, and the other is charged with the recruiting of the personnel of the Administration Department.

1. Field Troops.

12 infantry regiments of 4 battalions of 4 companies each.

4 hussar regiments of 4 squadrons each, plus 2 dépôt squadrons altogether.

4 field artillery regiments, each consisting of 2 brigade divisions of field and 2 batteries of horse artillery. The battery consists of 6 guns and 12 ammunition wagons.

1 engineer regiment, consisting of sappers and pontoniers.

4 transport detachments.

4 hospital companies.

4 gendarmerie divisions.

2. Fortress Troops.

4 fortress artillery regiments.

2 fortress infantry regiments.

The effective in peace time is 100,000 men in round numbers, and about 1,800 officers. The infantry is formed into 4 divisions, in which are distributed units of the other branches of the Service.

The Mobilised Army

Consists of:—

1 cavalry brigade.

4 infantry divisions.

2 fortress divisions.

The Cavalry Brigade consists of the 4 hussar regiments and of 8 horse artillery batteries. Each division consists of 3 infantry regiments, 1 cyclist company, 1 artillery regiment of 2 field artillery brigade divisions, 1 company of engineers, and the ratio and ammunition supply services. Each fortress division consists of 2 fortress artillery regiments and of 1 fortress infantry regiment. The effective of the Army on a war footing is 210,000 men.

Nether-
lands.

Armament.—The infantry is armed with the Mannlicher, model 1895 with a calibre of 6.5-mm. The artillery has just completed its re-armament with a Krupp Q.F. *matériel*, with hydraulic brake, spring recuperator, and shields 4-mm. thick, consisting of 204 guns, 408 ammunition wagons, and 200 wagons for the supply of ammunition. The following are the characteristics of the *matériel*: Calibre, 75-mm.; weight of projectile, 6 kilogrammes; number of 11 gr. shrapnel bullets, 270; initial velocity, 508-mm.; maximum range, 6,400-mm.; weight of gun in battery, 950 kilogrammes; weight of carriage, 1,750 kilogrammes; weight of ammunition wagon, 1,800 kilogrammes; rapidity of fire of gun per minute, 20 shots.

This *matériel* was adopted on the 8th January, 1904, and the armament was completed in 1906 at a cost of about 4 million francs. In the field each gun is provided with 216 shrapnel and 32 common shell.

Defensive System.—In addition to the important Field Army, of which she has just completed the reorganisation, the Netherlands has an admirably conceived defensive system. General Langlois, in his book, "La Belgique et la Hollande devant le Pangermanisme," thus clearly summarises the situation:—

"The Netherlands has a maritime front of 350 kilometres, an eastern one of 350, and a southern frontier of 200 kilometres. The country is but little threatened from the sea; nevertheless, all the channels are properly guarded. The real danger to the Netherlands comes from the east, where she cannot hope to defend her enormous frontier with her limited forces. Facing the east the line of the Yssel, which unites the Rhine with the Zuyder Zee, forms a first line of defence of 90 kilometres, permitting, to the support of 2 forts on the Rhine, of a resistance of some days necessary to mobilise the Army and to extend the inundations. Behind a large quadri-lateral of 60 kilometres, entirely surrounded by water, and containing the densest population, richest people, the most important towns (Utrecht, Rotterdam, the Hague, Haarlem, and Amsterdam), forms a fortified zone, the eastern side of which is protected by inundations and a whole series of fortifications. The southern side, already covered by Belgium and Anvers, is formed by the large mouths of the Meuse, themselves defended by works. Finally the northern side, traced by the Nord-Kanal and the Zuyder Zee, is protected by 3 forts and by the entrenched camp of Amsterdam, which forms the redoubt of this formidable zone. This system is the stronger on account of the liberty of sea communications, assured by the Navy, which permits of a continual replenishment of food, *matériel*, and *personnel*."—*Armée et Marine*.

Report on the Contingent for 1906.—The contingent to be raised for the whole of the territorial and naval forces in the districts of the Russian Empire, subject to the general recruiting regulations, was fixed by an order of the 9th May, 1906, at 469,718 men, not including the Cossack contingent, which may be reckoned at about 16,500 men (Finland no longer furnishes a contingent).

Russia

Russia. This contingent amounted to 475,346 men in 1905, to 447,402 men in 1904, to 320,832 men in 1903, and to 318,000 men in 1902. The considerable increase in the numbers called to the colours in 1904 and in 1905 was due to the Russo-Japanese war, and the number in 1906, only less by about 6,000 men to that for 1905, is accounted for by the reduction in the period of service to 3 years, adopted in 1906. The population of Russia may be estimated at the beginning of 1907 at 146 millions, of whom 2,800,000 are Finns.

The number of youths inscribed on the census lists of 1906, viz., those who reached the age of 21 years on the 14th October of that year, was 1,148,002. The number of those put back from preceding years was 101,484. These give a total of 1,249,486 men. The men called to the colours for the first time were thus distributed according to religions:—

Christians	1,045,594
Israelites	63,463
Karaites	95
Mussulmans	37,267
Pagans	1,583

Total ... 1,148,002

The number of those exempted from military service amounted to:—

	Men.
For the 1st Category	263,761
For the 2nd Category	225,616
For the 3rd Category	69,588

The number of men who failed to appear was 76,819, of whom 19,998 were Israelites. The number of men actually inscribed as belonging to the contingent was 448,140, of whom 445,202 were actually enrolled; 2,919 were posted at once to the reserve on account of their professions (doctors, professors, etc.), and 19 exempted from service. The number of those who failed to join was 21,578, of whom:—

8,769 were Christians.
11,270 were Israelites.
38 were Karaites.
1,442 were Mussulmans.
59 were Pagans.

The commissions had to examine 707,445 men. The result of this examination was as follows:—

1. Quite unfit for military service	78,988
2. Drafted into the Militia (2nd Levy) on account of insufficient height	63,924
3. Put back	75,016
4. Taken on trial	35,040
5. To undergo a second medical examination	4,425

As has been stated above, the number of men inscribed as belonging to the contingent was 445,202, and that of the men drafted at once into the 1st Levy of the Militia was 185,298.—*Revue Militaire des Armées Etrangères.*

United States.

The Army in 1906.—The Secretary for War published, in December last, his Annual Report on the United States Army for 1906:—

On the 15th October, 1906, the actual effective of the United States Regular Army was 3,709 officers and 54,659 men, distributed as follows :—

United States

					Officers and Men.
United States	...	...	...	...	38,671
Alaska	...	...	...	...	792
Philippines	...	...	...	...	11,952
Porto Rico	...	...	...	...	9
Cuba	...	...	...	...	4,950
Hawaii	...	...	...	...	237
Detachments en route and sundries	...	...	...	...	1,757
Total	...	...	...	...	58,368

The corresponding total effective on the 15th October, 1905, was 59,814, thus showing a decrease of 1,446 for the year 1906.

On the 15th October, 1906, the Hospital Corps consisted of 3,177 officers and men. In addition to the above were the following, which are not included in the Regular Army, viz. :—

The Porto Rico Regiment, 25 officers and 554 men.

The Philippine Scouts, 116 officers and 5,013 men.

The total of the forces of the United States for 1906 was, thus, 67,253 officers and men. In 1905 it amounted to 68,594, showing a total decrease of 1,341 for 1906.

Officers.—The Secretary for War states that too many officers were detached for staff or special duty. The cadres of these latter are, as a matter of fact, composed entirely of officers borrowed from corps in which they are not replaced. A scheme proposed last year by the Government to remedy the inconvenience resulting from this state of affairs was not voted.

During the course of the budgetary year (1st July, 1905, to 30th June, 1906), out of a total of 96 sub-lieutenants promoted, 77 came from West Point, and 19 from the ranks. No commission had been given to candidates coming direct from the Universities. On the 1st July, 1906, when commissions were conferred on candidates from West Point, 57 vacancies remained, which were reserved in part for candidates from the ranks, and in part (12 places) for candidates from certain Universities where military courses are held, and of which the professors are officers of the Army.

Recruiting.—The recruiting for the Regular Army showed a considerable deficit during the year 1905-6; 24,083 men were enrolled, of whom 8,849 were re-engaged men and 15,234 recruits, whilst during the preceding year 33,739 men were enrolled, 13,392 being re-engaged men and 20,410 recruits. In spite of the greatest efforts on the part of recruiting officers, writes Mr. Taft, the recruiting requirements could not be completely satisfied during last year, and compared with the conditions of the previous year the difficulties have rather increased than diminished. It is to the dearth of manual labour and to the high trade salaries, consequent on the unexampled prosperity enjoyed by the United States, that this unfavourable situation, as regards the Army, must be attributed. The same causes, too, influence the number of cases of desertion. The proportion of deserters is disquieting. It amounted to 7.4 per cent. of the total number of men serving during the budgetary year 1905-6, whilst it was 6.8 per cent. for the previous year. The average for the three years 1902-4 was 6.1 per cent., and 4.5 per cent. for the ten years from 1895 to 1904. These numbers would be even higher if, instead of considering

United States

the total number of men present during the year, the average effective of the Army were considered. The number of deserters in 1905-6 was 6,258 in the Regular Army, a figure which represents more than 11 per cent. of the average effective of men of that year. Up to the present all efforts to eradicate this evil have failed.

Territorial Divisions and Distribution of Troops.—From a military point of view the United States is divided into 9 departments, or 4 divisions consisting each of 2 or 3 departments. The Philippine Islands form, in addition, a division of 3 departments. These divisions were organised at the beginning of 1904. Before that date the chiefs of the 9 military departments corresponded directly with the Secretary for War. The new machinery has merely given rise to useless complications, and Mr. Taft intends, in consequence, to abolish the territorial divisions at an early date.

With the object of facilitating the training of the troops, the Secretary for War proposes to introduce, progressively, important reforms in their distribution throughout the States. The troops will be grouped, as far as possible, by brigades or regiments in sufficiently ample "reservations" to allow of the carrying out of manœuvres in varied country. Forts Runell (Wyoming), Leavenworth (Kansas), Riley (Kansas), and Sam-Houston (Texas), already occupied by large garrisons, will, owing to the acquisition of new ground, be transformed into "brigade posts." On the very extended country of Fort Sill (Oklahoma), Fort Oglethorpe (Georgia), and American Lake (Washington) it will also be possible to form permanent garrisons of the effective of a brigade. By utilising the brigade and regimental posts now occupied, Mr. Taft thinks that the United States Army has an excellent distribution and garrisons as regards training.

CORRESPONDENCE.

THE MANCHESTER MARINES.

To the Editor of the JOURNAL of the ROYAL UNITED SERVICE INSTITUTION.

SIR,—The following brief account of the above-named Corps may be of interest to some of the readers of the JOURNAL of the Royal United Service Institution:—

France declared war against England on the 1st of February, 1793. There being a great scarcity of troops, the town of Manchester at once proved, as of old, its loyalty in raising soldiers for the service of the State. On the 19th of February, at a meeting of the local gentry and merchants, presided over by the Borough Reeve, it was decided to open a subscription and offer an additional bounty of six guineas to each of the first five hundred men entering the Marine service. A corps was at once formed under the name of "The noble, free, and spirited Manchester Corps of Marines," recruits being also obtained from Oldham, Ashton, Rochdale, and other surrounding towns, and by the end of June 815 recruits had been enrolled. In all, 1,027, not counting boy drummers, were raised for the service of the King and country at this time of need at a cost of upwards of six thousand pounds; they wore a hat-ribbon of blue silk with letters in gold. Marched to Chatham, the headquarters of the 1st Division, they were drafted for active service. The record of the capture of the French

frigate "L'Ambuscade" by the "Boston" on the 1st of August, 1793, after an action of two hours, in which Lieutenant James Edward Butler, commanding the Marines, and the Captain of the ship were killed by the same shot, when standing hand-in-hand singing "God save the King," to encourage the crew, says: "Lieutenant Butler was a promising young gentleman, devotedly beloved by his brother officers and the men under his command, who happened upon this occasion to be principally raw lads from Manchester, who are reported to have behaved most nobly throughout the whole action, probably as severe a one as has ever been fought."

For the capture of a Spanish galleon each man of this corps present received £200 as prize money. The *Manchester Mercury* of this date says: "The French had been clearing the seas, but the Manchester Marines had come to the rescue." Lieutenant Richard Williams, afterwards Colonel Sir Richard Williams, K.C.B., of the Royal Marine Artillery, being then at Manchester, advised the Committee when raising the Corps, and on the termination of its work in January, 1794, the two flags belonging to the Corps were placed with due honours in the Collegiate Church under the colours of the 72nd Regiment.

A hat ribbon is in the possession of Samuel Andrew, Esq., of Hey, Lees, Oldham, and only one other specimen of the ribbon has been preserved.

W. PORTLOCK DADSON,

Late of H.M. Body Guard, formerly of R.M. Light Infantry.

29th May, 1907.

NAVAL AND MILITARY CALENDAR.

MAY, 1907.

- 6th (M.) H.I.H. Prince Fushimi arrived in London from Japan on a Mission to H.M. the King.
- 10th (F.) 57th Co. R.G.A. left Mauritius for England to be disbanded.
- 14th (T.) H.M.S. "Scylla" completed complement for Special Service in the West Indies.
- 16th (Th.) H.R.H. the Prince of Wales presented new Colours to the 2nd Bn. Prince of Wales' Own (West Yorkshire Regiment) at Aldershot, and inspected the 1st Bn. Royal Welsh Fusiliers.
- " " H.R.H. the Duke of Connaught opened the Royal Naval and Military Tournament at Olympia.
- 17th (F.) H.M. the King visited the Royal Naval and Military Tournament.
- 20th (M.) Wreck of French Armoured Cruiser "Chanzy" on Ballard Island, Chusan Group.
- 21st (T.) H.M.S. "Crescent" arrived at Portsmouth from the Cape.
- 22nd (W.) H.R.H. the Duke of Saxe-Coburg and Gotha inspected the 2nd Bn. Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's) at the Castle, Edinburgh.
- 24th (F.) H.M.S. "Exmouth" paid off at Portsmouth.
- " " H.M.S. "Scylla" left Sheerness for West Indies.
- 25th (Sat.) H.M.S. "Exmouth" re-commissioned at Portsmouth for service in Atlantic Fleet.

- 27th (M.) H.M.S. "Commonwealth" paid off at Devonport.
 " " H.I.H. Prince Fushimi inspected the 2nd Life Guards at Albany Street Barracks, and the 1st Bn. Coldstream and the 1st Bn. Scots Guards at Chelsea Barracks
 28th (T.) H.M.S. "Commonwealth" re-commissioned at Devonport for service in Channel Fleet.
 " " Launch of First-class Battle-ship "Vérité" at Bordeaux for French Navy.
 29th (W.) H.M.S. "Forte" arrived at Chatham from Cape of Good Hope Station.
 " " H.M. the King presented new Colours to the 1st Bn. Coldstream Guards at Buckingham Palace.
 " " Launch of scout-cruiser "Birmingham" at Quincy Mass, for U.S. Navy.
 31st (F.) H.M.S. "Crescent" paid off at Portsmouth.

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GERMANY.—*Militär-Wochenblatt.* Berlin: 2nd May, 1907.—"The Advance to the Battle." "Cavalry Matters." 4th May.—"From what Points of View should the Infantry Prepare for a Defensive Fight?" "The Advance to the Battle" (concluded). "A new Swedish Plan of National Defence." 7th May.—"A Hundred Years Ago" (continued). "From what Points of View should Infantry Prepare for a Defensive Fight?" (continued). 9th May.—"Verdy's Studies on Strategy." "On the Chapter, "Cavalry Dismounted Action." "From what Points of View should Infantry Prepare for a Defensive Fight?" (concluded). 11th May.—"The Military Hand-book of the Bavarian Kingdom." "The Development of the Austro-Hungarian Artillery under Field-Marshal Ritter von Kropatschek." "An Army Enquiry in Italy." "On the Chapter, "Cavalry Dismounted Action" (concluded). 14th May.—"The New Field Artillery Drill Regulations." "On the Question of Subsistence for Troops in War." "The Military Hand-book of the Bavarian Kingdom" (concluded). "The Troops of the Bey of Tunis." 16th May.—"Lessons of the Russo-Japanese War for Field Artillery." "The New Army Medical Regulations." "Cavalry Reconnaissance under Service Conditions." 18th May.—"A Hundred Years Ago" (continued). "Riding of Officers of the French and the Austro-Hungarian Cavalry." "Lessons of the Russo-Japanese War for Field Artillery" (concluded). 23rd May.—"Russian Army List for 1907." "Sir Ian Hamilton's Book on the Russo-Japanese War." 25th May.—"The Military Importance of Afghanistan." "Combined Artillery and Engineer Schools." 28th May.—"Range Tables." "Intelligence of the Austro-Hungarian Forces." 30th May.—"A few Remarks on the Reply to "Reconnoitring Woes." "From the Posthumous Papers of a Defender of Colberg, 1807." "Intelligence from the Chinese Army."

Internationale Revue über die gesamten Armeen und Flotten. Dresden: May, 1907.—"Military and Naval Intelligence from Austria-Hungary, Belgium, France, Germany, Great Britain, Italy, Montenegro, Portugal, Russia, and the United States." Supplement 68.—"The Employment of Cavalry in the Russo-Japanese War." *French Supplement 98.*—"Eighteen Months with the Russian Army in Manchuria." "The Necessity of Night Exercises for the Cavalry Officer." "The Field Gun of the Future." "The Lessons of the Russo-Japanese Naval War from an Artillery Point of View" (continued). "The "Dreadnought."

Jahrbücher für die Deutsche Armee und Marine. Berlin: May, 1907.—"Considerations of the Tactical Employment of Shield-Protected Field Artillery." "Efficiency before Cover?" "Clothing and Equipment." "The Cavalry Non-commissioned Officers' School at Hanover." "Contraband of War."

Artilleristische Monatshefte. Berlin: May, 1907.—"The New German Drill Regulations." "Theory of Barrel-Recoiling Guns" (concluded). "The Accompaniment of the Infantry Attack by Field Artillery." "Experiments with the Krupp 7.5-cm. Q.F. Guns before a Servian Commission." "Artillery Considerations." "Percussion Fuse with Cut-off Retardation."

Neue Militärische Blätter. Berlin: April, 1907. No. 17.—"The French Army of 1907." "The Amour Railway." "Foreign Military Prospects." "The Non-participation of Army and Navy in Elections." "On the Subsistence, Health Precautions, and Clothing of Troops and Travellers in the Tropics" (*continued*). "The Special Horse for Field Artillery." "Military Intelligence." No. 18.—"The Glorious Share of the Senior Prussian Infantry Regiment (No. 1 Graf Kunheim) in the Campaigns of 1805 and 1806, under Blücher, and the Downfall of the Regiment." "Cavalry in Modern War." "On the Subsistence, Health Precautions, and Clothing of Troops and Travellers in the Tropics" (*concluded*). "Military Intelligence."

May, 1907. No. 19. — "The Purchase of the Infantry Officers' Charger." "Cavalry in Modern War" (*continued*). "The Glorious Share of the Senior Prussian Infantry Regiment (No. 1 Graf Kunheim) in the Campaigns of 1805 and 1806 under Blücher, and the Downfall of the Regiment" (*continued*). "Colonel Heistand on China's Future." "Important Wireless Telegraph Stations." "The Italian Army." "Military Intelligence." No. 20.—"The Glorious Share of the Senior Prussian Infantry Regiment (No. 1 Graf Kunheim) in the Campaigns of 1805-1806 under Blücher, and the Downfall of the Regiment" (*continued*). "Cavalry in Modern War" (*concluded*). "Kuropatkin's Revelations of the Russo-Japanese War." "Preparatory and Further Training of Officers." "Military Intelligence."

ITALY.—*Rivista di Artiglieria e di Genio.* Rome: April, 1907.—"On the Training of Field Artillery Batteries." "Captain Cardona's Notes on Improvised Fortification." "Some Considerations on the Armament of Coast Batteries." "The new German Provisional Training in Field Fortification." "The Piedmontese Fortress Artillery in the Campaign of 1848-49" (*continued*).

Rivista Militare Italiana. Rome: April, 1907.—"On Fighting with Modern Weapons." "Battle Training." "Discipline and Courage." "On Intellectual Military Training." "General Giacomo Longo." "The Sardinian Army in the Action of the 24th June, 1859" (3 Appendices and 2 Maps). "An Answer to a Criticism (on the Italian Fortress Artillery), with one Sketch."

May, 1907.—"Army and Militia." "Some Ideas as to the Tactical Qualities of Machine Guns and the Tactical Principles guiding their Employment." "On a Collection of Dates, Photographs, Designs, Tables, Documents, etc., Relating to Military Standards." "Blockades and Sieges from the Standpoint of Common Law." "The Sardinian Army in the Action of the 24th June, 1859 (with 9 Maps) (*continued*). "A Plea for the Institution of Army Corps Libraries." "A Programme for some Legal and Social Instruction in Military Units." "Fencing in the Army." "Some Observations and Notes on the Infantry Training Manual." "Napoleon's Death." "On the Tactics and Fire Discipline of the Field Battery."

PORTUGAL.—*Revista de Engenharia Militar.* Lisbon: March, 1907.—"The Proofs of Fitness for the Rank of Major in general and in particular for the Engineer Branch." "The Projected Railway from Quilimane" (*continued*). "On the Effects of the Detonation of Explosives" (*concluded*).

Revista de Infanteria. Lisbon: May, 1907.—"Machine Guns" (continued). "The Magazine Apparatus of the Mauser-Vergueiro Rifle." "On the Evolution of Infantry Tactics" (continued). "The Portuguese Flag." "On the Entry of Officers for Over-sea Service." "A new Infantry Bullet." "The Sergeants."

Revista Militar. Lisbon: March, 1907.—"The National Defence: Political Preparation for War." "The Methods to be Employed to Assure for the Cavalry a Sufficiency of Remounts and a Rapid Mobilisation" (continued). "Cyclist Units." "The Superior Training in the Navy." "A Spanish Chronicle." "Portable Infantry Tools."

RUSSIA.—*Voïennyyi Sbornik.* St. Petersburg: April, 1907.—"From the Reminiscences of General Timofiev on the Battle of Prussisch-Eylau." "The Caucasian Expedition in 1845" (concluded). "Strategic Review of the Operations of the Russo-Japanese War up to Liao-Yang" (concluded). "The Defeat of the Rear Guard of General Zerpitski's Corps at Mukden." "The Ammunition Supply of Field Batteries." "The General Staff and its Idiosyncrasy." "A Commando to Sakhalin" (concluded). "Through Bokhara."

May, 1907.—Has not been received.

SPAIN.—*Memorial de Ingenieros del Ejército.* Madrid: April, 1907.—"The Eclipse of the Sun on the 30th August, 1905: *Resumé* of some of the Observations made" (concluded). "The Men's Food in the 1st Mixed Regiment of Engineers." "On Military Bibliography" (continued).

Revista Técnica de Infanteria y Caballeria. Madrid: 1st May, 1907.—"Military Science in Athens (Lectures by Colonel Marva): Disarmament and Neutrality." "Military Exercises in Catalonia (September, October, and November, 1906)" (continued). "Cavalry and Musketry Instruction" (continued). "Our Soldiers in Africa" (concluded). "Studies on Infantry Tactics" (continued). "The Military Education of the Japanese People." 15th May.—"Military Science in Athens (Lectures by Colonel Marva): Naval Warfare, Judged by Recent Battles." "Military Exercises in Catalonia (September, October, and November, 1906)" (concluded). "Some General Remarks on the Training of Infantry." "Cavalry and Musketry Instruction" (continued). "Relations between Armament and Tactics." "Our Soldiers in Africa" (concluded).

Revista Científico-Militar y Biblioteca Militar. Barcelona: May, 1907.—"The Law of Recruiting." "Tactical Employment of Machine Guns with Infantry in the Attack and Defence." "Cavalry or Mounted Infantry?" "Port Arthur" (continued). "Ranches and Rancheros." "Creation in Portugal of the Superior Council of National Defence."

SWITZERLAND.—*Revue Militaire Suisse.* Lausanne: May, 1907.—"The New Military Law." "Why Marshal Bernadotte did not appear either at Jenna, Anerstardt, or Eylau." "Adoption of Barrel-recoiling Guns by Mountain Artillery." "The Attack and Defence of a Fortified Field Position" (concluded).

UNITED STATES.—*Journal of the Military Service Institution.* Governor's Island, N.Y.H.: May, 1907.—"The Commissioned Strength of the Regular Army in War." "What System of Promotion and Retirement will Secure the Highest Degree of Efficiency, etc?" (*Silver Medal*).

"Military Hygiene: How can the People be Educated to Appreciate its Necessity?" (*Seamen Prize*). "French and German Artillery: A Comparison" (*concluded*). "Military Policy of the United States." "Map Making and Topography." "The Arab as a Factor in Horse Breeding." "Comments and Criticism." "Types and Traditions of the Old Army." "Translations and Reprints."

Journal of the U.S. Cavalry Association. Fort Leavenworth, Kansas: April, 1907.—"More about Machine Guns." "The Danish Rifle Mit-railleuse." "Weapons and Munitions of War." "Durbar Week at Agra." "Five Hundred Mile March." "Handling a Wagon Train." "Army Horse Shoeing." "United States versus Burns." "The German Fort Riley." "A Glimpse of Foreign Armies." "Weapons and Munitions of War" (Part V). "Reprints and Translations." "Military Notes."

Army and Navy Life. New York: May, 1907.—"A Military View of the Panama Canal." "The United States Corps of Engineers." "Use of Volunteer Engineers in War." "Austria at Jamestown." "Army Horses." "Rear-Admiral C. F. Goodrich." "The Inter-State National Guard Convention." "A Parabolic Plea of Tropic Possessions." "The Mormons in '63." "The Black Peril in South Africa." "An Afternoon at Dry Tortugas." "Rear-Admiral Willard Herbert Brownson." "Italy at the Exposition." "The 23rd U.S. Infantry." "The First Hague Conference Treaty."

Journal of the United States Artillery. Fort Monroe, Va.: March-April, 1907.—"Fuses and Primers." "Attacks upon Fortified Harbours." "Radio-Telegraphy for the Artillery." "German Wireless Telegraph Detachment." "Krupp Cemented Armour and Capped Projectiles." "Quick Method for Dismounting Mortars." "Explosives and Explosions." "Professional Notes."

PRINCIPAL ADDITIONS TO LIBRARY, MAY, 1907.

Captain James Cook, R.N., F.R.S., "The Circumnavigator." By ARTHUR KITSON. 8vo. 15s. (John Murray.) London, 1907.

The Fall of Napoleon. By OSCAR BROWNING. 8vo. 12s. 6d. (John Lane.) London and New York, 1907.

The Unveiled East. By F. A. MCKENZIE. 8vo. 12s. (Hutchinson & Co.) London, 1907.

Two Years on Trek, being some Account of the Royal Sussex Regiment in South Africa. By the late Colonel J. G. DU MOULIN, C.M.G. 8vo. (Murray & Co.) London, 1907.

Conférences sur la Guerre Russo-Japonaise faites à l'Académie d'Etat-Major Nicolai. Publié par le Rouskii Invalid. Traduit du Russe. Fasc. 1 and 2. 8vo. 4s. 6d. (Henri Charles-Lavauzelle.) Paris, 1907.

A Year in Russia. By MAURICE BARING. 8vo. 10s. 6d. (Methuen & Co.) London, 1907.

The Imperial Gazetteer of India. New edition, published under the authority of H.M.'s Secretary of State for India in Council. Vols. 1, 3, and 4. 8vo. (Clarendon Press.) Oxford, 1907.

Regulations for Recruiting for the Regular Army, Militia, and Imperial Yeomanry, 1907. Crown 8vo. 6d. (Presented.) Harrison & Sons.) London, 1907.

Official History of the Operations in Somaliland, 1901-04. 2 vols. 8vo. 7s. (Harrison & Sons.) London, 1907.

The Problem of National Defence. By Major C. ROSS. 8vo. 12s. (Hutchinson & Co.) London, 1907.

The Art of Naval Warfare. By Admiral Sir CYPRIAN BRIDGE. 8vo. Presented. (Smith, Elder & Co.) London, 1907.

The Waterloo Campaign, 1815. By J. H. ANDERSON. 8vo. 3s. (Presented.) (Hugh Rees, Ltd.) London, 1907.

Termini Tecnica Militari Inglesi e Italiani (English and Italian Technical Military Terms.) By Capitano A. CAIANI. 8vo. (Presented.) (G. de Agostini & C.) Rome, 1907.

Equitation. By Capitaine de SAINT-PHALLE. 2 vols. 8vo. 9s. (Lesondier.) Paris, 1907.

The Campaign of Magenta and Solferino, 1859. By Colonel H. C. WYLLY, C.B. Crown 8vo. 5s. (Presented.) (Swan, Sonnenschein & Co., Ltd.) London, 1907.

The Evolution of Tactics. By Major G. GILBERT, I.A. 8vo. 7s. 6d. (Presented.) (Hugh Rees, Ltd.) London, 1907.

The Licensed Trade. By E. A. PRATT. 8vo. 5s. (Presented.) (John Murray.) London, 1907.

The Waterloo Campaign. By Lieut.-Colonel S. C. PRATT. Crown 8vo. 5s. (Presented.) (Swan, Sonnenschein & Co., Ltd.) London, 1907.

Vergleichender Rückblick auf die neueste Tagesliteratur über den Infanterieangriff. By General VON SCHERFF. 8vo. (R. Eisenschmidt.) Berlin, 1906.

RECENT PUBLICATIONS OF MILITARY INTEREST.

COMPILED BY THE GENERAL STAFF, WAR OFFICE.

APRIL, 1907. PUBLISHED QUARTERLY.

*Communicated by the General Staff and reprinted by permission of the
Controller of His Majesty's Stationery Office.*

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PREFATORY NOTE.

This Pamphlet will be issued quarterly, in April, July, October and January. Its purpose is to draw the attention of Officers to British and Foreign publications of Military interest which are likely to assist them in their professional work. Copies of the pamphlet will be distributed to the Headquarters of Commands, Educational Establishments, Units and Reference Libraries.

PART I.

NOTICES OF PRINCIPAL WORKS.

NOTE.—When the price is not given, it is not known.

HISTORICAL.

The Chasseurs of the Vosges and the Bridge of Fontenoy (Les Chasseurs des Vosges et le pont de Fontenoy). By Lieut.-Colonel Saint-Etienne. 215 pp. Maps and Plans. 8vo. Toul, 1906 Imprimerie Lemaire. 2s. 6d.

An accurate and detailed account of the destruction of the railway bridge over the Moselle at Fontenoy, just east of Toul, on the 22nd January, 1871. It will be remembered that up to the middle of January, 1871, the only line of railway open to the Germans before Paris was the one from Mayence and Strasbourg through Toul; hence it was vital to them to preserve this one intact. The author describes in succession the various preparations made in the opening weeks of the war to permit of the bridge being destroyed if necessary, and not the least interesting part of the work is the study of the refusal of the officer in charge to take the responsibility of blowing up the bridge when it was on the point of falling into the enemy's hands, because no orders had been given him to do so. The various abortive attempts at demolition are related, and finally the brilliant raid by the Francotireurs and Mobiles which succeeded in severing the German line of communication, though too late to produce the decisive effect which the operation would have had if carried out earlier in the campaign.

The whole book is of great interest and full of valuable instruction.

The Battle on the Scha Ho (a supplement to the "Militär Wochenblatt"), August, 1906. To which has been added an Essay, Comments on the Battle on the Scha Ho, by Gen. Lieut. v. Caemmerer. Authorised translation by Karl v. Donat. 125 pp. Nine maps and three appendices. 8vo. London, 1907. Rees. 7s. 6d. net.

An instructive account of the fighting on the Scha Ho, accompanied by a series of maps, the scales of which allow military and topographical details to be adequately presented. The "Comments," by Gen. Lieut. v. Caemmerer, are valuable and worthy of study.

A Staff Officer's Scrap-book during the Russo-Japanese War. Vol. II. By Lieut.-General Sir Ian Hamilton, K.C.B., D.S.O. 364 pp. 8vo. 26 sketch maps and panoramas, and 17 photographs. London, 1907. Edward Arnold. 18s. net.

This second volume contains the story of what Lieut.-General Hamilton saw, heard and thought while attached to the Headquarter Staff of the First Japanese Army under General Baron Kuroki during the battles of Liao-yang and the Sha Ho; a short account of his visits to the battle-fields of Te-li-su and Nan Shan and to Port Arthur shortly after the capitulation; and a brief narrative of the battle of Hei-kou-tai.

Being a transcript of the notes which the General recorded in his diary at the time, it is not an historical account of the operations of the First Army, but it will be a very valuable commentary on that account when it is written.

Sir Ian considers that for soldiers the greatest lesson of the war is the necessity of changing their characters, so that they may become less jealous and egotistical, and more loyal and disinterested towards each other. He admits, however, fifty pages further on in his work, that as much could have been learnt by any one "who studied 1870, and recognised the loyalty with which the German generals supported each other; who has considered how ungrudgingly assistance was rendered, whether asked for or not, irrespective of the corps or even of the army to which such units belonged."

Much food for reflection will be gained by reading this work in conjunction with Major von Tettau's *Achtzehn Monate mit Russlands Heeren in der Mandschurei* noticed elsewhere, which describes the battle of Liao-yang from the point of view of General Kuroki's opponents.

The panoramas of the battle-fields supplied with the book are excellent; that sketch maps only are provided is now of little importance as the Russian General Staff maps have been made available in Major von Tettau's book and the account of the Sha Ho issued by the *Militär Wochenblatt*.

Russo-Japanese War.

(a) *La Battaglia di Mukden.* By Luigi Barzini. 52 illustrations, 15 plans and a large map. Milan, 1907. Fratelli Treves.

(b) A German translation of the above, entitled:—

Mukden. By Luigi Barzini, translated from the Italian by Emil Kerbs. 32 illustrations, 15 plans and large map. Dieterich'sche Verlagsbuchhandlung Theodor Weicher. Svo. Leipzig, 1906. 6 marks.

The author was the special correspondent of the Milan paper *Corriere della Sera* attached to the Second Japanese Army. The present volume is a collection of his letters which originally appeared in the *Corriere della Sera*, and contains much vividly descriptive writing full of "local colour." The writer himself disclaims any attempt to write history as distinguished from contemporary narrative, and has preferred to record his original impressions, as written when the events described were fresh in his mind, rather than overlay them with facts and dates subsequently ascertained.

The Battle of Mukden is described as it appeared to an eye-witness on the spot—with its obscurity, doubts, mistakes, and problems, some of which have been explained and cleared up since.

The reader will not find in this book pretentious criticisms, nor "useful military lessons" cut dried. As the author remarks in his preface, "A citizen soldier may show himself a hero, or the reverse, before the enemy, according to the mental impression he has formed of the facts of a modern battle, of the atmosphere of modern war."

"A journalist is the typical man in the street, and for this very reason it may be useful to know his impressions, as it is precisely by 'men in the street' that the wars of to-day are fought."

This work has also been translated into Russian, and is especially interesting in its vivid word-pictures of incidents and episodes. Its value is enhanced by the numerous plates and the large clear map.

The Russo-Japanese War (La Guerre Russo-Japonaise). By Major R. Meunier. 668 pp. 17 plates and 19 sketches. Svo. Paris, 1906. Berger-Levrault & Co. 15 francs.

The compiler is a Staff College graduate and professor at the *École d'Application de l'Artillerie et du Génie*. The work is a useful summary. About 400 pages are given to the operations, 100 pages to comments, and 150 pages to appendices: orders of battles, translations of detailed accounts of actions which have appeared in the foreign press, etc. The maps are in black and white only, but are very clear.

Monographs on the Russo-Japanese War. Parts 1 to 10 (Einzelschriften über den Russisch-Japanischen Krieg. Heft 1—10), issued as supplements to *Strenge österr. Milit. Zeitschrift*. Svo. Vienna, 1905-8. Seidel & Son.

Part 1. The hostile forces; introductory history; events at sea until beginning of May, 1904. 64 pp. 3 maps. 1/8.

Parts 2 and 3. Mobilisation; landing of the First Japanese Army; battle of the Ya-lu, and advance to Fêng-huang-cheng. 141 pp. 5 maps. 3/4.

Part 4. *Rennenkampf* at Sai-ma-chi; landing of the Second Japanese Army. 197 pp. 1 map. 1/8.

Part 5. Battle of Nan Shan; events at sea from 4th May to 21st June, 1904. 256 pp. 3 maps. 2/6.

Parts 6 and 7. Landing of Fourth Japanese Army; the battle of Tê-li-ssu. 328 pp. 5 maps. 4/2.

Parts 8, 9, 10. Port Arthur. 146 pp. 19 maps and plans.

The above monographs are practically the Austrian official account of the war, as the Austro-Hungarian General Staff has handed over the material it collected to Seidel and Co., the well known military publishers for editing and issue. The Austrians appear to have been singularly well-informed from both sides with regard to the operations, for the account is very complete. The maps are excellent.

Eighteen Months with Russia's Armies in Manchuria. Vol. 1 (Achtzehn Monate mit Russlands Heeren in der Mandchurei). By Major Freiherr von Tettau. 400 pp. 8 maps and numerous photographs. Svo. Berlin, 1906. Mittler. 8/6.

The author, a well-known authority and writer on the Russian Army, was one of the German Attachés with the Russian forces. His first volume, the only one at present published, contains a very outspoken account of the war up to the retreat

after the battle of Liao-yang, and is of great military value. Being attached first to Count Keller's detachment and afterwards to the Xth Army Corps, which opposed the advance of General Kuroki, Major von Tettau relates the same events as Lieut.-General Sir Ian Hamilton in *A Staff Officer's Scrap-book*, but from the other side. A number of orders are given verbatim in appendices. The maps are reproductions of the Russian General Staff maps and sketches. The book is profusely illustrated with reproduction of photographs.

The Siege of Port Arthur (La si ge de Port-Arthur). By Colonel C. de Grandprey, of the French Engineers. 150 pp. 6 maps, plans of forts, a panorama and 11 woodcuts. 8vo. Paris, 1906. Berger-Levrault & Co. 5 francs.

A very useful summary compiled from Russian and German articles and books, and the reports of British newspaper correspondents.

Port Arthur (Military-historical Monograph Series (Port Arthur. Kriegsgeschichtliche Einzelschriften)). issued by the German Great General Staff. 93 pp. 12 maps, numerous photographs and 24 panoramas. 8vo. Berlin, 1906. Mittler. 5/-.

This is the first of the series of publications on the Russo-Japanese war by the Great General Staff. It contains the account of the investment and siege, with the conclusions to be drawn from them. The maps are excellent, they show in colour on the 1 to 30,000 scale the state of the defences at the outbreak of the war and at the commencement of the siege six months later, and the attackers' works at four different periods.

Official History of the Operations in Somaliland, 1901-04. General Staff, War Office. 616 pp. 2 Volumes. 2 maps, 51 plates. London, 1907. To be purchased, either directly or through any Bookseller, from Wyman & Sons, London; or Oliver and Boyd, Edinburgh; or E. Ponsobny, Dublin. Vol. I. 3/- Vol. II. 4/-.

This history has been compiled from information obtained from all available official despatches and reports, and from unofficial diaries and descriptions of various incidents furnished by officers who took part in the four expeditions in Somaliland during 1901-04. The aim has been to produce a military history which may not only be a reliable record of events, but also an interesting and instructive study for all ranks, of all the more important work undertaken by units, services and departments in connection with the conduct, organisation and administration of one of the so-called "small" wars which the British Army is so often called upon to undertake.

Napoleon I. at the Camp of Boulogne (Napol on Ier au Camp de Boulogne). By Fernand Nicolay. 455 pp. 8vo. Paris. Perrin & Co., 35, Quai des Grands-Augustins. 5 francs.

At a time when the construction of a Channel Tunnel is again under consideration, a detailed account of the last actual project of the invasion of England from France is peculiarly interesting. M. Nicolay is a French barrister who has had access to many unpublished documents relating to the camp at Boulogne, and though his narrative is disjointed and, perhaps, more interesting to the historian of detail and to the lover of personal anecdote, it contains much that is of interest to the military student.

The idea of the invasion of England first materialised on October 27th, 1797, when the Directory gave orders for the concentration of an army for that purpose. In February, 1798, Buonaparte, accompanied by Marshal Lannes, went to Boulogne to select a point for embarkation. The project, however, was interrupted by the Egyptian campaign, but renewed in 1801. It lapsed when the Peace of Amiens was signed on March 20th, 1802, but upon hostilities again breaking out between England and France on May 17th, 1803, the project was once more taken up in earnest. On June 29th Napoleon, "Citizen First Consul," the hero of Italy and Egypt, arrived at Boulogne, where he was received with the greatest enthusiasm, though the Paris Press was only permitted to announce his absence from the capital. Monsieur Nicolay states that this time the force available in England to repel invasion consisted of 130,000 Regulars, 70,000 Militia, and 50,000 Reserve. By strenuous efforts these numbers were raised in six months to a total of 550,000 regular and auxiliary troops. Fortifications were raised round London, a system of constant signalling communication established, and large drays, drawn by six horses and capable of carrying 60 men, were held in readiness for a rapid concentration.

The actual number of French troops concentrated at any one time about Boulogne is very variously given by the different authorities, and even our author is on this score delightfully vague and variable (cf. pp. 16, 39, 447 and 448). We may take it, however, that from June, 1804, to August, 1805, the total varied from 150,000 to 200,000, and never exceeded the latter figure. The troops were distributed in four camps: the Right Camp, the Left Camp, the Camp of Wimereux (Marshal Lannes), and the Camp of Ambleteux (Marshal Davout). They were accommodated in huts built of wood and mud plaster and thatched with straw, which held 15 men each. Plays given by theatrical companies from Paris, dances, concerts, f ts, sports and horse racing served to while away the monotony of camp life. At the same time drills, manoeuvres and reviews were constantly going on. The sailors drilled on shore

and the soldiers practised rowing in the boats of the flotilla. Napoleon even organised a corps called "Marines of the Imperial Guard," a remnant of which survived to fight at Waterloo. Boulogne and the adjacent coast were heavily fortified, and an efficient system of semaphore signalling established between the headquarters of the army and Admiral Bruix, who commanded the fleet and flotilla. This latter consisted of about 2,300 boats of all sorts, pinnaces, gunboats, despatch-boats, caïques (small sailing boats carrying 1 gun and 1 howitzer), fishing smacks, transports, flat-bottomed boats, etc. Embarkation was frequently practised and could be accomplished in two hours. English spies were constantly in Boulogne, and when caught were instantly shot.

The numerous digressions, though in themselves interesting, somewhat detract from the value of the book as a sustained narrative of events. For instance, the author makes an interesting comparison between the projected invasion of Napoleon and that of Caesar, who embarked at Portus Itius (probably Boulogne), pointing out that both had at their disposal only ships driven by sail and oar. Again, the discourses on the galley-slave system, and has an interesting chapter on the privateer system, showing how from 1793 to 1815 French privateers captured no fewer than 10,800 English merchant vessels, and including a notice of some of the most famous privateer captains, Thurot, Duchoenne, Bucaille, Broquant, etc.

In referring to the caricatures of Napoleon which were then so popular in England, the author reproduces a drawing, dated 1803, which is preserved in the Boulogne Museum, and which has a special interest for us at the present time. It represents a French fleet of aerostats crossing the Channel, while the French army is shown marching through a submarine tunnel.

There are many interesting letters and anecdotes of Napoleon showing his unwearying activity, his great attention to detail, and his constant care for the welfare of the rank and file. Amongst his favourite proverbs we find "*Qui ne risque rien, n'attrape rien*" (Nothing venture, nothing win). Some people have doubted whether Napoleon ever really intended to invade England or whether the concentration at Boulogne was merely intended to attract the attention of Europe while he was carrying out his plans elsewhere. A study of M. Nicolay's interesting book should convince even the most sceptical that though Napoleon was well aware of the difficulty of the undertaking, yet there is no doubt that he intended to put his plans into operation, but that international events in Europe made him change his mind and divert his forces in the direction of Ulm. On September 2nd, 1805, Napoleon left Boulogne and hurried after his army, which was already on its way to the Austrian border.

The Natal Rebellion of 1906. By Captain W. Bosman, A.D.C. to Colonel McKenzie, with an introduction by Colonel McKenzie, C.B., C.M.G. 222 pp. With a map, plans, and illustrations. London, 1907. Longmans, Green & Co. 5/-.

This book gives a clear account of Colonel McKenzie's operations against Bambata, Sigamanda, Messeni and other native chiefs. It is copiously illustrated, and plans are given to illustrate the various actions which generally took the form of drives. A map is inserted at the end which covers the area of Colonel McKenzie's operations. The illustrations give a good idea of the intricate and mountainous character of the country, which materially increased the difficulty of the operations.

The writer attributes the success of the operations to the skill shown by Colonel McKenzie in his dispositions and to his personal influence and example.

The result of the operations was the capture or killing of all the important chiefs with two minor exceptions, and this result reflected great credit on the skill of the commander and the endurance of the men, who at times had to make most exhausting marches.

An interesting feature of the book is Sigamanda's narrative of the murder of Piet Retief and his party of Boers in 1838.

An appendix contains a full report of the trial of Sigamanda.

Blücher. Volume I. (1742-1811). By Major General von W. v. Unger. With portraits of Blücher and sketch maps. 401 pp. 8vo. Berlin, 1907. Mittler, Kochstrasse, 68-71. 8-50 marks; or bound, 10 marks.

General von Unger, now commanding the 20th Cavalry Brigade, is the first soldier who has written an account of the great Field Marshal; previous biographers, as Varnhagen (1837) and Scherr (1862), having been civilians. The present volume gives an account of Blücher's career up to 1811.

Born at Rostock in 1742, Blücher, at the age of fifteen, joined the Swedish Hussars. He was taken prisoner by the Prussians in 1760, and, being given a commission by Frederick the Great, fought on his side in the campaigns of 1761 and 1762. Incurring the displeasure of the King during the occupation of Poland, Blücher was cashiered in 1773, but after the death of Frederick in 1787, he was reinstated as a Major in his former regiment. In 1793-94 Blücher took part in the campaign west of the Rhine against the forces of the newly formed French Republic, and reached the rank of Major-General.

In the disastrous campaign of 1806-07 Blücher held a high command under the Duke of Brunswick, and after the defeat of Auerstadt made a masterly retreat northwards to Lübeck and Ratkau, at which latter place he was forced to surrender. The period from the peace of Tilsit (1807) to 1811 was that of Prussia's deepest humiliation, and during that time Blücher had no opportunities of displaying his military capacity.

The book is a good commentary on the stormy times in central Europe under Frederick the Great, and his two successors. With patriotic oversight the author scarcely mentions Prince Hohenlohe's crushing defeat at Jena, though he is discursive enough on the Austrian defeats at Austerlitz, Aspern and Wagram, in which Blücher

took no part. For the military student, the most interesting chapters are those dealing with the campaign of 1806-07. Appended there is a good list of authorities in detail. We look forward with pleasure to the appearance of General von Unger's second volume, which will deal with the Waterloo campaign.

The French Cavalry from 1740 to 1789. (La Cavalerie de 1740 à 1789). Official publication of the French General Staff. Compiled by Major Desbrière and Captain Sautai. 151 pp. 8vo. Paris, 1906. Berger-Levrault & Co., 5, Rue des Beaux-Arts. 3 frs.

At the beginning of the 18th century the French Cavalry was organized in companies of 25 to 35 troopers, four companies forming a squadron. Its total strength at the commencement of the war of the Austrian Succession was 22,400, but this number was considerably increased during the progress of hostilities. Heavy and slow in movement, trusting rather to order and cohesion than to rapidity of attack, the cavalry did not distinguish themselves in this campaign.

At the commencement of the Seven Years' War in 1756, the French Cavalry totalled 37,842. A good account is given of the part played by this arm in the battles of Rosbach (plan) and Minden. At the close of the war, Choiseul introduced considerable reforms, but after his fall in 1770, the cavalry suffered from ministerial neglect, till Saint-Germain, a man imbued with German ideas, became War Minister in 1775, when numerous changes were introduced. A pitiable picture is drawn of the low moral character of the soldiers and wretched interior economy and organization of the army about 1789.

POLITICAL.

The German Empire. By B. E. Howard. 449 pp. 8vo. London, 1906. The Macmillan Company. 8/6 net.

This work deals comprehensively with the foundation and constitution of the German Empire, the status and powers of the Kaiser, and his relations with the various independent states. The question of Imperial Legislation is fully dealt with and the relations between the *Bundesrat* and *Reichstag* explained. The writer also deals in some detail with the judicial organisation of the Empire, its financial condition and the constitution of the armed forces. The 78 Articles of the Imperial Constitution are given in the last chapter.

The Rise and Decline of the Netherlands. By J. Ellis Barker. 478 pp. 8vo. London, 1906. Smith, Elder & Company. 10/6 net.

A political and economic history and a study in practical statesmanship. The history of the Netherlands is traced from 1200 until its downfall at the end of the eighteenth century, and concludes with an analysis of the causes which led to the decline and the lessons taught by it, particularly as applied to Great Britain with reference to the effect of party government.

China Renaissance and Militant (La Chine Novatrice et Guerrière). By Captain D'Ollone. 318 pp. 8vo. Paris, 1906. Librairie Armand Colin. 3-50 francs.

A very clever survey of the history of China, the evolution of its religious system, its administration and government, and the recent reforms. About 21 pages are devoted to the new army.

Belgium and Holland with reference to Pan-Germanism (La Belgique et la Hollande devant le Pan-Germanisme). By Général Langlois. 105 pp. 8vo. Paris, 1906. Berger-Levrault & Co., 5, Rue des Beaux Arts. 1/3.

This volume includes an interesting series of articles which General Langlois contributed to the "Revue Bleue" and the "Temps" in the course of 1906. The writer's object was to call attention to the threatened absorption of Belgium and Holland by the German Empire, and to disclose the "economic turning movement" which he accuses the latter of preparing against France, as a prelude to a strategic operation of a similar nature by the German Army.

The first half of the work is devoted to a study of the defence of Belgian neutrality, and includes a thorough examination of the Belgian military resources. General Langlois views with disfavour the vast sums spent by Belgium on her fortress system, and advocates universal military service in order to provide a larger field army. Her existing forces, he says, are unequal to the task of preventing the violation of her territory, while Antwerp, the keystone of the national defences, could not hold out against direct aggression, cut off as it might be from overseas assistance.

In the second portion of the volume the author discusses the question of a Dutch-Belgian alliance. Dealing with the problem both from the economic and military point of view, he comes to the conclusion that the only way for Holland and Belgium to withstand the pressure of Germany is for them to combine. He also points out the advantage of such a combination to Great Britain and France.

A sketch map of the projected defences of Antwerp is attached.

'Twixt Germany and England (Entre l'Allemagne et l'Angleterre). By Captain Sorb. 370 pp. 8vo. Chapelot. Paris, 1906.

Deprecating the tendency to rush into alliances from motives of sentiment, or even of commercial interest, the author maintains that before committing herself to any such entanglement, France should calculate the actual military and naval advantages which she would thereby gain. By a careful examination of various possible situations, he then endeavours to determine whether France has more to gain by allying herself with Great Britain or with Germany.

Taking first the case of war between the double and triple alliances, Captain Sorb comes to the conclusion that the decisive event will be the great battle in the neighbourhood of the Franco-German frontier, and that the rôle of the fleets will be entirely secondary. At the same time, in this as in every other case, he urges that the French fleet should be concentrated on the northern coast instead of being weakened by a large detachment of battle-ships left in the Mediterranean, where they can do no good. A chapter is then devoted to showing that France need not fear a contest with Germany in spite of the latter's numerical superiority. Russian aid is, however, indispensable.

Considering next a war with Great Britain, the author advocates a vigorous offensive against her maritime communications, coupled with threats of invasion, as the best method of protecting the French colonies. Here again he reiterates his pet theory as to withdrawing the Mediterranean squadron and concentrating the entire fleet in the Channel or Atlantic.

The value of an alliance with England in a war with Germany is then discussed, and the result is far from flattering to British readers. The facts which are here set forth are instructive, but the value of the author's conclusions is marred by his persistence in attributing to Great Britain designs of unscrupulous aggression.

In an Anglo-German war, the author has no difficulty in proving that France's attitude should be one of strict neutrality. "To sum up," he says, "with England France should be always friendly, but never allied. With Germany she can never be friends, but may find it to her interest to be allied."

Passing to more speculative theories, the writer proposes giving up Indo-China, which he says it is impossible for France to defend against serious attack, in order to concentrate all colonial effort in Northern Africa. It is suggested that in return for Indo-China, Germany might compensate France by Alsace and Lorraine and a free hand in Morocco. The idea of a Franco-Russo-Japanese alliance is also favourably entertained.

In conclusion Captain Sorb urges the reform of the French naval service which he compares unfavourably as regards the methods of higher leading and practical training of officers with the system long since adopted in the army. Unity of purpose and close co-operation between the services he rightly declares are of primary importance. Finally it is pointed out that the distribution of the fleet should be arranged with the sole view of war with England, as in case of war with any other Power the work of the fleet will be of minor importance.

On the whole, though the author's manifest distrust of England and his scarcely concealed dread of Germany, detract from its value, the book is interesting and not a little instructive. In particular it brings to light the comparative impotence of England in problems of European strategy consequent on her lack of adequate military power.

CAVALRY.

Cavalry in Future Wars. By Lieut.-General F. von Bernhardt. Translated by Charles S. Goldman. 305 pp. 8vo. London, 1907. Murray. 10/6 net.

We have here a book based on true principles and written in the true cavalry spirit. It shows us that by far the most important duty of cavalry is to gain intelligence. To do so it must put forth its full strength. Intelligence, not security, is, in fact, the principal object to be kept in view, and fundamentally different arrangements are necessary to accomplish both tasks. It is better not to assign them to one and the same body.

The reconnoitring cavalry must seek to drive their opponents from the field in order to rend the enemy's protective screen. To discover the whereabouts of the enemy's principal masses and the direction of their movements they must break through the line of infantry outposts; collision between the independent cavalries is therefore ultimately inevitable. In addition the civilian population must be kept in subjection, and the hostile communications threatened. How wide an activity, how vigorous a fighting power will therefore be demanded from cavalry in future? Bernhardt dwells much on the necessity for exercising the greatest economy in making detachments for secondary purposes, for husbanding the strength of horses, and for good horse management. He rightly insists that supply columns which accompany cavalry must be able to move as fast as the troops. Only on this condition is there any guarantee that the necessary supplies will be forthcoming, or, in other words, that the mobility of the squadrons will be maintained.

The vexed question of mounted and dismounted action is judiciously discussed, nor is there any detail from the higher training of officers to minutiae of drill and manoeuvre which is not thoroughly examined.

Cavalry on Service. Illustrated by the advance of the German cavalry across the Mosel in 1870. Translated from the German by General von

Pelet-Narbonne by Major D'A Legard, 17th Lancers. 350 pp. Maps. 8vo. London, 1907. Hugh Rees. 7/6 net.

While "Cavalry in Future War" lays down general principles, General von Pelet-Narbonne gives us actual facts by which they may be illustrated and tested. With characteristic German thoroughness, the course of operations of the German cavalry from the beginning of the war until the eve of Gravelotte is minutely analysed. A young officer wishing to study his profession cannot do better than trace the course of the various units on the maps liberally supplied, and reflect on the comments which are made on the manner in which operations were conducted.

Interspersed between these detailed records we find enforced the same lessons insisted on by such writers as Bernhardt. That reconnaissance, after all, means fighting, is proved by the actual events of the first week in August, 1870. Most instructive of all, perhaps, are the criticisms on the action of General von Rheinbaben's Cavalry Division which has become celebrated for its work on the 15th August. For the last five and thirty years or more our admiration has been somewhat lacking in discrimination. Rheinbaben surprised the French and gained an initial success, but he did not press his advantage home vigorously. True, he succeeded in checking the retreat of the French, but he should not have considered his task fulfilled until he had established contact with their forces of all three arms, and obtained valuable information for Army Headquarters. Here we see again that reconnaissance, after all, means fighting. This principle was not then established in the minds of German cavalry leaders. They had not been educated up to it. If books such as this are studied, Cavalry officers in future will not be open to such a reproach.

ARTILLERY.

Modern Field Artillery. (Современная полевая артиллерия). By E. K. Smislovski. (К. К. Смирновский.) 8vo. St. Petersburg, 1906.

A useful concise handbook of modern field guns, which explains principles clearly and does not lose itself in details.

INFANTRY.

Infantry Outposts and Advanced Guards in the Russo-Japanese War. (Способы службы передовых в Русско-Японскую войну.) By A. Ryabinin. 31 pp. Seven small sketch maps. 8vo. St. Petersburg, 1906. V. K. Shnyur, 29, Jukovakovo U.

This campaign, as we know, contained much that is instructive in outpost work, as the Japanese troops were frequently only a mile or so from the Russian sentries. A few of the hints given are worthy of notice, as, for example, that during the latter part of the campaign outposts were often relieved at sunset, as the men were found to be fresher and better able to resist night attacks, which were of frequent occurrence. Also, it was often found convenient to dispense with the reserve of the outposts, and work only with pickets and strong supports. A detailed account is given of a night attack on a Russian outpost on 10th-11th February, 1905, in which the Japanese were driven off.

The author attributes the failure of the Russian army to the fact that it had not been engaged with a great power since 1873.

The book is written in the naive and stereotyped manner of most Russian military publications, seeking to find in actual war examples of precepts laid down in official text-books, rather than endeavouring by examples of practical experience to show how official publications should be brought into line with modern requirements.

Complete Manual for Detachments of Trained Infantry Scouts. (Полное руководство для охотничьих команд.) By A. Myeshyetch. 130 pp. 8vo. St. Petersburg, 1906. Knigovoyed, 80, Katharine Canal.

A very useful handbook containing information on the following subjects:—

- (1) The origin and employment of trained infantry scouts.
- (2) The construction of scales, use of compass, drawing of conventional signs and plans. &c. (with hand sketches).
- (3) Reconnoitring duties and reports.
- (4) Outposts.
- (5) The "Ericsson & Co." field telephone.
- (6) Semaphore and lamp signalling.
- (7) Destruction of railways and demolitions.
- (8) The Maxim gun.
- (9) Judging distance.
- (10) The Suchet telemeter and binocular.
- (11) Bicycles.
- (12) Waterproof canvas floats (Staff-Captain Polyanski's invention).
- (13) Brief descriptions of the exploits of the trained infantry scouts in the Russo-Japanese War.

Mounted Detachments of Infantry Scouts in the Russo-Japanese War. (Монго-Охотничьи Команды в Русско-Японскую войну.) By P. D. Gira. 135 pp., with rough plans. 8vo. St. Petersburg, 1906. V. K. Shnyur, 29, Jukovakovo U.

The writer, who is a staff-captain of Cossacks, gives a detailed account of these detachments for the period 26.3.05 to 15.10.05, during which time they were principally employed in reconnaissances and in guarding the frontier between Manchuria and Mongolia against the Hung-hu-tsu.

The detachments were formed out of infantry regiments belonging to the 6th Siberian Army Corps; they served at first with this corps, and afterwards with detachments under the command of Prince Orbelian and Generals Mischenko and Grekov.

The writer emphasizes the usefulness of these troops, and considers that a regular mounted infantry should be formed for employment in future wars.

Company and Battalion Tactics, and the employment of Artillery in battle, based on the experiences of the Russo-Japanese War. (Бой поты и батальона, и применение артиллерии в бою, по опыту Русско-Японской войны.) By A. Detgarev. (A. Аеттгарев). 51 pp. St. Petersburg, 1906. Knigovyed, 80, Katharine Canal.

A short pamphlet containing many tactical platitudes, relieved, however, by some useful facts and suggestions.

The author, who appears to be a captain in the Russian Army, insists on the necessity for revising the existing Field Service Regulations, supporting his arguments by incidents drawn from the late war, and illustrating his proposals by diagrams.

The subjects thus dealt with are:—Company and battalion formations for attack and defence by day and night—the use of the bayonet—the employment of machine guns—the role of artillery in attack and defence by day and night, and its co-operation with infantry—dispersion of batteries—fire-control—indirect laying—the use of searchlights in the war—hill-fighting by day and night—inter-communication—signalling—the use of coloured lanterns for distinguishing units during operations by night.

MEDICAL.

The Supply of Medical and Surgical Material in the Field (El Servicio Farmaceutico en Campaña). By Don José Ubeda y Correal. 173 pp. 8vo. Madrid, 1903.

Contains a full account of the organization in foreign armies for medical and surgical supplies in the field with a detailed critical description of the material in use in the Spanish, German, Italian, and English Armies, method of packing, carrying, etc.

Invaliding Regulations of the Army, Navy and Colonial Forces. Their development and new provisions under the Law of May 31st, 1906. (Die Invaliden-Versorgung und Begutachtung beim Reichsheere, bei der Marine und bei den Schutztruppen; Ihre Entwicklung und Neuregelung nach dem Offizier-Pensions- und dem Mannschaffts-Versorgungs-Gesetze vom 31sten Mai, 1906.) By Dr. F. Paalzow, Generaloberarzt in the Prussian War Office. 243 pp. 8vo. Berlin, 1906. Hirschwald.

This work is volume twenty-four of the Bibliothek v. Coler. The first part is an historical account of the provisions made for invaliding in the German Army from the earliest times to the date of the new Regulations of May, 1906. The second part gives details of the new Regulations as affecting officers' pensions, provisions for the rank and file, etc., of the various services. A section is devoted to the method of estimating the amount of incapacity for earning a livelihood in percentages, according to the nature of each injury or other cause of invaliding.

A new method of estimating the physical condition of the soldier. (Nouveau Procédé d'Evaluation Physique du Soldat.) By Dr. Boureau and Dr. de Gaullejac. 51 pp. 8vo. Paris, 1906. H. Charles-Lavauzelle.

This pamphlet is intended to urge the value in physical equivalents of measurements taken round the upper part of the thigh and across the shoulders. These measurements are for the purpose of giving a co-efficient to the muscle value of these anatomical regions; as additions to the measurements of height and weight. Swedish and other methods of estimating physical equivalents are also noted.

The first line of medical assistance in a battle of the future. (Die erste Hilfe in einer zukünftigen Schlacht.) By Professor Dr. Hermann Fischer. 50 pp. 8vo. Berlin. 1906. Hirschwald. 1/3.

An academical study of the conditions at the commencement of a battle, during the main attack and after the objective has been gained. Gives twelve practical conclusions, in which a large share of the work is thrown on voluntary aid.

Tuberculosis of the lungs in the Army. (Die Lungentuberkulose in der Armee.) By Stabsarzt Dr. Fischer. 72 pp. 8vo. Berlin. Hirschwald. 1906. (No. 34 of Military Medical Publications issued by the Prussian War Office.)

Contains an account of the present state of tuberculosis in European armies, including Great Britain, with comparative tables followed by discussion of predisposing causes before entrance into the army and of the causes existing in military life; notes on the cause of the disease and general conclusions.

Medical Reports on the German Protectorates, for the year 1903-04. (Medizinal Berichte über die deutschen Schutzgebiete für das Jahr 1903-4.) Issued by the Colonial Section of the German Foreign Office. Berlin, 1905. 8vo. Mittler.

This series of annual reports contains full statistical information of the diseases prevalent in German East Africa, Cameroons, Togoland, German South West Africa, German New Guinea, the Carolines, Marshall Islands and Samoa, together with a list of publications of work done in connection with tropical and veterinary medicine by medical officers of the Government and Colonial forces, subsidized by the Colonial Department, during the year. There is also a map showing the distribution of Coast fever, Texas fever, and Tsetse Fly disease in German South East Africa.

Instructions regarding the Statistical Reports of the Health of the Army. (Instruction pour l'Etablissement de la Statistique Médicale de l'Armée.) 2nd edition published 1st February, 1905. 98 pp. 8vo. Paris. Lavauzelle.

These instructions give the detailed regulations regarding the preparations of monthly and annual statistical reports of the health of the French Army. They refer to modifications in the statistical reports introduced in 1901, but carefully retain the principles and uniformity of past statistics.

Military Hygiene, a Guide to Officers, Medical Officers, and Students. (Die Gesundheitspflege des Heeres.) By Dr. A. Hiller. 406 pp. 8vo. Berlin, 1905. August Hirschwald.

Written in simple language, the book contains chapters on food, drink, clothing, equipment, barracks, hats, tents, detention rooms, hospitals, prevention of disease in military service at home and abroad, and the prophylaxis of infectious diseases. It contains 138 illustrations in the text.

Report on the Russian Medical and Sanitary Features of the Russo-Japanese War to the Surgeon-General, U.S. Navy. By Surgeon Raymond Spear, U.S. Navy. 84 pp. 8vo. Washington. Government Printing Office, 1906.

The report gives a description of the organization and personnel of the Russian Army Medical Service, its hospital corps and its female nurses; an account of its work and also of the work and organization of the Red Cross Society, with comments on the latter; climatic and sanitary conditions of Manchuria; detailed descriptions of the several medical units; and some statistics. It contains a number of excellent photographs.

GENERAL.

Battle Tactics (Taktik. Vol. V. "Die Gefechtslehre"). By Major Balck. 481 pp. 3rd revised edition. 6 maps, 16 sketch maps and 19 diagrams. 8vo. Berlin, 1907. R. Eisenschmidt.

Major Balck has worked his way to the forefront of German military historians in a comparatively short space of time. His battle tactics, the subject with which he deals in the revised edition under review, shows that he is a master of the military history of all nations, and of the organization and tactics of their armies. He clinches his arguments with well-drawn illustrations from past campaigns, notably from the recent one in the Far East. The book deals with the general principles of battle tactics, the fight, retirement and pursuit, and is well worth study.

The Battle of the Future. (Die Schlacht der Zukunft). By Major I. Hoppenstedt. 241 pp. Map. 8vo. Berlin, 1907. Mittler. 4/6.

A detailed account of an imaginary four days' battle between French and German Armies in the neighbourhood of Limburg a. Lahn. The book is not, as might be supposed from its title, a forecast of Armageddon, nor does it contain anything fantastic or sensational. It is, as the author claims, a tactical text book of an

original kind. The author conducts the reader to and fro between the opposing forces, and treats him to a series of short vivid narratives dealing with the situation at numerous stages of its development as it appears to the various units on each side, from the cavalry officer's patrol up to Army Headquarters. In this manner all the ordinary problems of modern tactics are raised, discussed and answered as it were by living persons on the spot. The result is that the book, while being a scientific tactical text book, is yet eminently readable.

Chinese Empire, The Geography of the (Géographie de l'Empire de Chine (Cours supérieur)). By L. Richard. 564 pp. Maps. 8vo. Shanghai, 1904. Tou-se-we Orphanage Press.

A very complete, accurate, and scientific work by a Jesuit father attached to the celebrated Si-ka-wei Observatory near Shanghai. Political and economic geography is included as well as physical; there are chapters on the government, finances, army and navy, population, languages, religions, mines, industries, commerce and communications. The Chinese characters for all place names and titles of officials are given in brackets after the French transliteration.

The Next War (La Prochaine Guerre). By Général H. Bonnal. 125 pp. 8vo. Paris, 1906. R. Chapelot & Co., 30, Rue Dauphine.

This work presents in book form, four essays of General Bonnal. The first, entitled "The Next War," discusses the value to France of an alliance with England in a war with Germany. In opposition to a writer who recently published an article on the same subject in the "National Review," General Bonnal considers the prospective advantage of British assistance as altogether illusory. The main features of the military struggle are discussed, and the grouping of the opposing French and German forces outlined. It is interesting to note that the Germans are supposed to have seized the initiative as a matter of course, and that the French are compelled to assume a defensive attitude at the outset. The phases of the first great battle on the frontier are traced, and the view is advanced that the result of the initial encounter will decide the war.

The result of the campaign will therefore be decided within a month after the outbreak of hostilities, although the war may possibly drag on for a considerable period; "before this," the author concludes by saying, "the English will have sought safety in their island."

The second essay deals with the staff and supreme command of the French army. The present system of selection and training of staff officers is severely criticised; in General Bonnal's opinion, the large amount of time devoted to office work and administrative detail precludes the possibility of sufficient tactical training being acquired.

A criticism of an article by the German General Staff on the use of strategic or "army" advanced guards forms the third essay. General Bonnal considers that, after the first great encounter in a Franco-German war the use of such advanced guards will be advantageous. At the outset, however, the opposing forces would be too close to admit of their employment.

The concluding essay is a review of General Kuropatkin's farewell order to the officers of the 1st Russian army in Manchuria, pointing out the causes of Russia's failure.

Peking, Indiscreet Letters from. By B. L. Putnam Weale. 310 pp. One photo and one plan. 8vo. London, 1907. Hurst and Blackett. 7/6.

The author, who writes under a *nom-de-guerre*, was an eye-witness of the siege of the Peking Legations in 1900. He was at the time in the Imperial Maritime Customs Service. The letters contain some very sarcastic criticisms on the diplomatic representatives of the leading Powers and other prominent characters of the siege.

The Alarm (L'Alerte). By Pierre Baudin. 298 pp. 8vo. Paris, 1906. Chapelot.

The author criticises the weak points of the French military organisation, taking as his text the heavy expenditure which had suddenly to be incurred at the time of the scare in 1903.

The most important part of the book is that devoted to a study of the frontier defences of which the author gives a clear and detailed description; an interesting comparison is also made between the French and German territorial organisation and arrangements for mobilisation. In place of spending vast sums on patching up old fortresses which, however necessary thirty years ago, are now no longer essential, Monsieur Baudin would have the money applied to facilitating a more rapid assumption of the offensive by the French troops.

In the later chapters various abuses now prevalent in the French Army are brought to light, chief among them being the excessive number of "employments" which prevents regimental officers from training their men for war. In his campaign against this evil the author will find cordial sympathisers.

Although a severe critic, Monsieur Baudin is no pessimist, but an ardent believer in the national and military genius of France. The interest of his book is thereby increased and his suggestions appear the more convincing.

The Army and the Navy (Guerre et Marine). By Paul Fontin. 240 pp. 8vo. Paris, 1906. Berger-Levrault. 3/-.
The Army and the Navy (Guerre et Marine). By Paul Fontin. 240 pp. 8vo. Paris, 1906. Berger-Levrault. 3/-.

The author calls this work an essay on the unity of national defence. His chief object is to bring to light the want of co-operation between the naval and military authorities in questions involving the interests of both departments. As a remedy for the deplorable waste of time and public money caused by this state of affairs he advocates the creation of a minister of national defence who would co-ordinate the work of the army and navy, and apportion the money which is to be spent on each in accordance with national necessities.

The author is of opinion that for France the expenditure of vast sums in the construction of battle-ships is an entire mistake. She can never rival England in naval strength and against Germany no fleet however strong will avail in the slightest to stay the march of her invading armies. The struggle in Lorraine, M. Fontin says, will be the decisive factor; therefore, the money now wasted on useless battle-ships would be better employed in developing France's military resources on her eastern frontier. The dangerous deficiencies in this direction at the time of the scare of 1905 are strongly emphasized. The author pins his faith uncompromisingly to torpedo-boat and submarine flotillas, which, he maintains, are more than a match for the most powerful battle-ships. In support of this view he adduces the lessons of the Russo-Japanese war, directly traversing the deductions that have hitherto been made from it as to the relative value of these two classes of vessels.

Monsieur Messimy, the reporter on the army estimates for 1905, has written a preface supporting most of the author's contentions.

War and Economic Development (La Guerre et le mouvement économique). By Captain Bernard Serrigny. 220 pp. 8vo. Paris, 1906. Lavanuzelle.

A thoughtful and suggestive study of commerce and industry in their relationship to war, interesting alike to students of political economy and the military art.

The author first traces briefly the evolution of society and government and their influence on the causes of war in general. From an examination of English history he then shows how a free people is in its earlier stages of economic development compelled to fight for raw material, markets and communications, but subsequently must have peace to exploit these advantages when once they are obtained. After pointing out that at the present time the real cause of every war is to be found in commercial interests alone, Captain Serrigny makes a careful analysis of the economic situation of the great nations in order to discover the direction in which their commercial interests are driving them, as regards peace or war. Although the author's conclusions may not in all cases be admitted, the facts are clearly presented in a way stimulating to the imagination. The French military budget is next examined, and by a comparative study of the expenditure of other nations it is shown that France pays less than any other great Power for war insurance. After this is what is perhaps the most interesting chapter of the book, the effect of war upon the industry and trade both of belligerent and neutral nations is discussed; for this purpose the Franco-German; the South African; the Spanish-American; and the Russo-Japanese campaigns are studied. In conclusion the author foreshadows the ultimate tendency of commerce towards, as he believes, universal free trade and the grouping of industries into vast agglomerations irrespective of nationality or class.

The book is full of every kind of statistics, but is nevertheless very readable, as no more figures are interpolated in the text than absolutely, but are conveniently placed in footnotes for reference when desired.

After the War: Facts concerning our Army. (После войны—О нашей армии.) By A. Gerna. (A. Герна.) 283 pp. 8vo. St. Petersburg, 1906. A. S. Suvorin, 13, Ertelev. 2/6.

A collection of essays. Those upon strategy, training, and administration are not of any great originality or importance. The author, who served in the 5th Rifle Brigade in the war of 1904-05, makes a few interesting observations upon matters of tactical interest. He is a strong believer in the utility of machine guns in the infantry attack. At Chang-tan-ho-nan on February 2nd, 1905, both wheeled and pack (tripod) maxim guns accompanied the Russian infantry. These first named, escorted by a company, were placed upon the right flank of the attack, and co-operated principally during its initial period, while the tripod guns were most useful in the later stages and enabled the Russians to hold the village which they had stormed. At this period the wheeled guns, as they offered too large a target, could not move, and were condemned to inactivity, while the tripod guns were carried up to the village by hand and lent very valuable support to the advanced infantry. They were of course harmless to the enemy's concealed artillery, but their presence alone was useful in that they diverted its attention from the Russian infantry, and their fire kept back the enemy, who was only 600 paces from the village. The author naturally prefers the tripod gun to the less mobile pattern, and remarks that in the light of the recent war the latter stands condemned for use with infantry. He thinks that machine guns should be worked in pairs; never singly, owing to the danger of breakdown.

The writer is of opinion that the indiscriminate, exaggerated use made by the Russians of field fortification was very prejudicial to the offensive spirit and mobility of the troops. "After Liao-yang, where we saw how strong field works are against the most desperate attacks, we had such faith in the all-saving virtues of digging that later on, when we assumed the offensive, we as a preliminary measure placed the army told off to attack behind a continuous line of trenches and fortified villages.

So with the 2nd Army before Shen-tan-pu. At first the army corps composing it (1st Siberian, VIII, X, 1st Combined Rifle) were excused from entrenching; but on the 26th January the 15th Division (VIII Corps) entrenched; on the 27th the Combined Rifle Corps was ordered to entrench; then the Xth Corps, and so on. Thus the living force, which had been accumulated with such pains, flowed away into the earth, like electricity in the hands of a bad workman." The author goes on to point out how the troops fresh from Russia (VIII and Rifles) became infected with the blight of passivity which was spreading throughout the army, and that the craze for entrenchment, which set in after Liao-yang, was excusable only during the period previous to that battle, when the Russians were inferior in numbers.

The ancient aphorism that field fortification is a matter of tactics and not of technique is also applied by the author. Fortification was left to the engineers as being a specialized branch of military science; the engineers, although their work was excellent from the technical point of view, consistently neglected to base their work upon the tactical requirements of the particular case. The tactical purpose of the works and the strength of the force which was to occupy them were factors too frequently overlooked.

The writer is not enthusiastic as regards the telephone as an aid in battle. His experience was that while higher commanders constantly demanded full reports from their subordinates in the front line and kept them talking the whole time, they on their side quite failed to keep their subordinates informed as to the progress of the action. They merely sent their own orders, and passed on those of the C-in-C. The result of this was to paralyse the initiative of subordinate commanders, who were kept in leading strings and meddled with through the medium of the telephone wire. In an army like Russia's, in which the tendency to wait for orders is already far too pronounced, the telephone is an instrument which requires very judicious handling.

The Turkistan-Siberian Railway. (Туркестано-сибирская Железная дорога). Proceedings of meetings of the Central Asian Department of the Society of Oriental Knowledge. Edited by P. A. Rittich. 90 pp. 4to. St. Petersburg, 1906. Knigovyed, 80, Katharine Canal.

A useful publication setting forth the views of certain well-known Russian Engineers, military officers and others, on the project for a railway joining the Siberian and Central Asian systems.

The pamphlet is divided into three parts, viz.:-

- (a) A report by L. M. Goldmerstein, giving the history of the project since 1898, the various routes proposed, a description of the country to be traversed, and the strategic and commercial advantages of the projected line.
- (b) A lecture by Engineer L. I. Yugovich on the means available for realising the necessary capital.
- (c) The report of a Committee appointed to consider the cost of construction and the financial outlook of the proposed line.

This Committee decided that the direction of the line must be determined by the strip of cultivable country between the Ala-tau mountains and Lake Balkash, that the resources and climatic conditions of the country are such as to promise a satisfactory return for the outlay, and that it only remains to determine the following points, viz.:-

- (1) the place where the river Ob should be crossed;
- (2) the approach to Barnaul;
- (3) the point of junction with the Siberian Railway.

The general direction approved was as follows:-

Tashkent Chimkent-Aulie Ata-Pishpek-Tokmak-Vyerni-Sergiopol-Semipalatinsk-Barnaul to a point on the Siberian Railway somewhere between the Rivers Ob and Tom.

Each of the reports and lectures is followed by a discussion in which certain officers (notably Lieut.-Colonel Snyesarev of the General Staff) lay stress on the strategic importance of the proposed line, while others express various opinions both in favour of and against it from a commercial as well as a strategical point of view.

Mountain Fighting. (Горная война.) By Captain A. Svyechin, General Staff, from personal experience of Russo-Japanese War. 128 pp. 8vo. St. Petersburg, 1906. V. Berezovski, Kolokolnaya, No. 14. 1/8.

A short and interesting treatise in which the writer deals with the following points:-

- (a) The necessity of a thorough topographical and geological study of possible theatres of war in mountainous countries.
- (b) The late war has shown that defiles and valleys have lost much of their tactical importance, the more important operations now take place on the summits and ridges of mountains.
- (c) Examples of the great difficulties and dangers of this class of fighting.
- (d) The enormous importance of good infantry lightly equipped.
- (e) Troops trained in level countries have to assume different tactical formations in mountain fighting.
- (f) The advantages and disadvantages of night attacks.
- (g) Employment of artillery and value of mountain guns.
- (h) Criticises the organisation and work of the engineer troops.
- (i) The importance of fortified supporting points.
- (j) Necessity for curtailment of transport.

Bush Warfare. By Lieut.-Colonel W. C. G. Heneker, D.S.O., Con-naught Rangers. 196 pp. 13 plans. London, 1907. H. K. Lewis. 6/- net.

Colonel Heneker has written a book which is both instructive and interesting. He deals principally with West African warfare, though operations in other parts of the world are touched upon. The first, and longest, chapter in the book discusses the modifications in bush tactics which have been brought about as the result of our experience, and of the increased warlike skill of the native tribes. As Colonel Heneker points out we have trained the natives of Africa to fight and the tribes throughout the country are leavened with our time-expired soldiers.

The remainder of the work goes into the details of campaigns in the bush. The question of transport and supplies, including ammunition, is very carefully and closely examined. Numerous instances from past campaigns are recounted in support of the author's statements, and are illustrated with clear sketch maps.

PART II.

OTHER WORKS NOT DEALT WITH IN PART I.

A.

Aerial Navigation, the German Empire in the days of. By R. Martin. (Berlin-Bagdad. Das deutsche Weltreich im Zeitalter der Luftschiffahrt, 1910-1931.) 160 pp. 8vo. Stuttgart and Leipzig. Deutsche Verlags-Anstalt. 3/.

Africa, Operations by German troops in South-west. Great General Staff. (Die Kämpfe der deutschen Truppen im Südwest-Afrika.) Part IV. 8vo. 106 pp. 2 maps. Berlin, 1907. Mittler. 4d.

Airships, the development of travelling by, in the twentieth century. By Major Gross. (Die Entwicklung der Motor Luftschiffahrt im 20. Jahrhundert.) 31 pp. 8vo. Berlin, 1906. Otto Salle. 1/.

Armageddon, 190—. By Seestern. Translated by G. Herring. With an introduction by Admiral the Hon. Sir E. R. Fremantle, G.C.B. 8vo. London. Kegan Paul & Co. 6/.

Army, The, in 1906; a policy and a vindication. By the Rt. Hon. H. O. Arnold-Forster, M.P. 568 pp. 8vo. London, 1906. J. Murray. 15/- net.

Army Estimates for 1907-1908. Folio. London, 1907. Wyman & Sons. 2/1.

Army Estimates for 1907-1908, Memo. of the Secretary of State relating to the. 10 pp. Folio. London, 1907. Wyman & Sons. 4d.

Artillery. Range tables and instructions for practice for the Austro-Hungarian Field Artillery. 67 pp. 8vo. Seidel. Vienna, 1906. 8d.

Artillery Fire, the Battery. By Major W. A. Nicholson, R.F.A. pp. xi. + 196. Illustrations. 8vo. London, 1907. Stanford. 5/- net.

Artillery Tactics, Questions of, in the light of the Russo-Japanese campaign. (Russian.) A paper read before the Society of Military Art, St. Petersburg. 56 pp. Maps and plans. 8vo. Published by the Artillery Journal, St. Petersburg, and to be purchased at Knigovyed Shop, 80, Katharine Canal, St. Petersburg.

Australia, General Scheme of Defence for. Report of Committee of Officers appointed by the Minister of State for Defence, to consider and report upon the general scheme of defence for Australia, as submitted by the Committee of Imperial Defence. Organisation, etc. 30 pp. Folio. Melbourne, 1906.

Australia. Report by the Inspector-General of the Commonwealth Military Forces, September, 1906. No. 77. Folio. Melbourne, 1906. J. Kemp, acting Government printer for the State of Victoria.

Australia. Report of Committee of Naval Officers of the Commonwealth assembled at Melbourne, Victoria, to consider the Memorandum of the Committee of Imperial Defence, and report as regards the Naval Defence of Australia. 26 pp. Folio. Melbourne, 1906. J. Kemp, acting Government printer for the State of Victoria.

Australia. Report of the Department of Defence for the period from March 1st, 1901, to June 30th, 1906, by the Acting Secretary, Department of Defence. No. 79. 15 pp. Folio. Melbourne, 1906. J. Kemp, acting Government printer for the State of Victoria.

B.

Battle of Tsushima, The. Between the Japanese and Russian fleets, fought on May 27th. 1905. By Vladimir Semenoff. Translated by Captain A. B. Lindsay. With preface by Sir George Sydenham Clarke. 198 pp. 8vo. London, 1906. J. Murray, 3/6 net.

Bechuanaland Protectorate, Report. London, 1907. Wyman. 4d.

British Army under Wellington, The. A Summary. By T. Miller Maguire, M.A., LL.D. Maps and illustrations. 8vo. London, 1907. William Clowes & Sons, 4/- net.

British Central Africa. Blue Book for the year ending March 31st, 1906. Folio. Zomba, 1906.

British Empire, The. The Geography, Resources, commerce, Landways and Waterways of the British Dominions beyond the Seas, with full index. By J. M. D. Meiklejohn, M.A. Eighth Edition (revised to 1906). 360 pp. 8vo. London, 1907. Meiklejohn and Holder, 3/.

Burma. A handbook of practical information. By Sir J. G. Scott, K.C.I.E., with special articles by recognised authorities on Burma. 520 pp. Maps and illustrations. 8vo. London, 1906. Alex Moring.

C.

Campaign in Croatia and Dalmatia in 1809. (Kämpfes in des Lika Kroatien und Dalmatien 1809.) By Field Marshal-Lieutenant E. v. Wornowich. 92 pp. 8vo. Stern. Vienna, 1906. 1/8.

Campaign of 1793, The Army of the North and the Ardennes in the. (Campagne de 1793, à l'armée du Nord et des Ardennes.) By Captain Dupuis. Historical Section of the French Staff. 508 pp. Maps. 8vo. Paris, 1906. Chapelot.

Cavalry in 1870, up to the capitulation of Sedan. By Colonel G. Cardinal von Widdern. (Kavallerie 1870 bis zur Kapitulation von Sedan.) Part VII. Maps and Plans. 8vo. Berlin, 1906. Eisenschmidt. 8/9.

Ceylon, The, Handbook and Directory, 1906-7. 8vo. Colombo, 1906.

Colonials, The, in South Africa, 1899-1902. By John Stirling. 510 pp. 8vo. London, 1907. William Blackwood & Sons, 10/- net.

Commerce in War. By L. A. Atherley-Jones, K.C., M.P. 676 pp. 8vo. London, 1907. Methuen & Co. 21/- net.

Conquest of Prussia in 1806, Napoleon's. By T. Loraine Petre, with an introduction by F.M. Earl Roberts, V.C. Maps, plans, &c. London, 1907. J. Lane. 12/6.

D.

Delfzijl, The Blockade of. (De Blokkade van Delfzijl in 1813-14.) Compiled under the direction of the General Staff by Major-General F. H. Sabron. 182 pp. With maps. 8vo. Breda. Royal Mil. Academy. 6/5.

Departmental and Transport Services in the War of 1870. By Cardinal v. Widdern. (Der Kleine Krieg und der Etappendienst.) Part III. in 2 volumes. 187 and 101 pp. 8vo. Berlin, 1907. R. Eisenschmidt.

Dictionary, Technical Military. By Frobenius. (Militär-Lexikon, Handwörterbuch der Militärwissenschaften.) 100 pp. 8vo. Berlin. Martin Oldenburg. 4/-.

E.

Egypt, The, of the Future. By Edward Dicey, C.B. 216 pp. 8vo. London, 1907. Heinemann, 3/6.

Engineers, Professional Papers of the Corps of, U.S. Army. No. 29.— Engineer Field Manual. Part 4, Railroads. Part 5, Field Fortification including Mining and Demolitions. 173 pp. Plates. 8vo. Washington, 1905.

Enteric Fever in India, and in other tropical and sub-tropical regions. A study in epidemiology and military hygiene. By Major Ernest Roberts, M.B. XIV. + 571 pp. Maps. 4to. London, 1906.

Explosives, Notes on Military. By Major Erasmus M. Weaver, U.S.A. 311 pp. 8vo. New York, 1906. Chapman & Hall, 12/6.

F.

Far East, The; its history and recent development. Its present position after the late war. (This forms Part 8 of the series "Russland in Asien.") (Der ferne Osten; seine Geschichte, seine Entwicklung in der neuesten Zeit und seine Lage nach dem russisch-japanischen Kriege. Russlan in Asien, Band 8. Teil 1.—Zur Geschichte des fernen Ostend bis, 1906. Port Arthur und Dalnij unter russischer Herrschaft. Die Verbindungen der Mandchurei und des Amur-Bezirks mit Europa und die Verkehrsverhältnisse im Innern.) By Gen.-Maj. C. v. Zeppelin. Maps and plans. 8vo. Berlin, 1907. 6/6.

Fight, Our Last. (Unser letzter Kampf.) Anonymous. 230 pp. Published by C. W. Stern, Vienna and Leipzig. 8vo. 1907. M. 2.50.—K. 3.

Fire in the Field, The Use and Abuse of. By Brig.-General Pilcher, C.B., A.D.C., a lecture delivered before the Aldershot Military Society Jan. 11th, 1907, together with a discussion. 13 pp. 8vo. London, 1907. Rees. 6d.

From my Life, etc. (Aus meinem Leben, etc.) By Gen. Prinz Kraft zu Hohenlohe-Ingelfingen. Vol. 3. The Wars of 1864 and 1866. The time of peace until 1870. Vol. 4. The War of 1870-71. Journey to Russia. (Band 3. Die Kriege 1864 und 1866. Friedenszeit bis 1870. Band 4. Der Krieg 1870-71. Reise nach Russland). Portrait, map, and plans. 8vo. Berlin, 1906-07. 9/6.

G.

Geography. The astronomical-geodetic work of the Austro-Hungarian military geographical institute in Vienna. Vol. 2k. 4to. Vienna, 1906. 10/.

Geography in relation to War. By Colonel E. S. May, C.B., C.M.G. 62 pp. 8vo. London, 1907. Rees, 2/- net.

Gneisenau. By Oberstleutnant R. Friederich. Vol. 6 of The Teachers of the Prussian Army. Edited by Gen.-Leutnant G. v. Pelet-Narbonne. (Erzieher des preussischen Heeres. Band 6.) 132 pp. Portrait. 8vo. Berlin, 1906.

H.

Hausa Language, Dictionary of the. 2nd Edition. Vol. I.—Hausa—English. By the Rev. Charles Henry Robinson, M.A. 8vo. Cambridge, 1905.

Herreros, The Campaign against the (Der Feldzug gegen die Herreros). By the German General Staff. Part I. 262 pp. Berlin. Mittler. 1/2.

Herreros, My experiences in the war with the. Or, Hot Days. (Heisse Tage.) By Lieut. Stulpnagel. 126 pp. 12mo. Berlin. R. Eckstein. 2 marks.

Horses, Hints on, with short notes, on Camels and Pack Animals; also, a few practical suggestions on the training of Polo Ponies, etc. By Major H. P. Young. 89 pp. 8vo. Leamington, 1906.

Horse, The Twentieth Century Book on the. By Sydney Galvayne. 346 pp. 1907. Bailliere, Tindall, & Cox. 20/- net.

I.

India, Standing Orders of the Schools of Musketry in. 15 pp. 12mo. Calcutta, 1906.

Indian Staff College Regulations. Provisional. 16 pp. 8vo. Simla, 1906.

J.

Japan Year Book, The. Compiled in Japan. 546 pp. 8vo. Tokio, 1906. The Japan Press, London, E.C. 7/-.

L.

Lectures, 264 subjects, drawn from modern wars, suitable for winter studies, or. With list of authorities to be consulted. By Immanuel. (264 Thermata für Winterarbeiten und Vorträge.) 50 pp. 8vo. Berlin, 1907. Mittler. 1/8.

Lessons culled from Notes made in Peace and War, 50. By Brig.-Gen. E. A. H. Alderson. 22 pp. 8vo. Yorktown, 1906.

M.

Macedonia and Its Christian Population (La Macédonie et sa Population Chrétienne). By D. M. Brancoff. Two maps. 270 pp. 8vo. Published by Plon-Nourrit et Cie, 8 Rue Garancière, Paris. 5 francs.

Mahdi, with Lord Kitchener against the. Notes of a Prussian Gen. Staff Officer upon the Sudan Campaign. (Mit Lord Kitchener gegen den Mahdi. Erinnerungen eines preussischen Generalstabsoffiziers an den englischen Sudan-Feldzug.) By Maj. Adolf v. Tiedemann. 206 pp. Portraits and plans. 8vo. Berlin, 1906.

Manœuvres, Problems for field. By Lieut. Nixdorff. (Beiträge zur Technik der Aufgabenstellung für Offizierfeldübungen.) 127 pp. 8vo. Berlin, 1907. Mittler. 3/6.

Medical. The medical examination department, Description of, and hints for guidance of officers. (Die Vorbereitung, Leitung und Ausführung des militärischen Invaliden-Prüfungs-geschäfts) by Major Siber. 44 pp. 8vo. Berlin, 1905. Mittler. 8d.

Military Forces in the United Kingdom. Memorandum on the. By the Rt. Hon. R. B. Haldane, K.C., LL.D., M.P., Secretary of State for War. London, 1907. Wyman & Sons. 1d.

Modern History. The Study of. By the Right Hon. The Viscount Esher, G.C.V.O., K.C.B. A lecture delivered before the Aldershot Military Society, January 15th, 1907. 29 pp. 8vo. London, 1907. Rees. 6d.

Moltke's Military Works, etc. Group 2. Part 3. General Staff Tours, 1858-1869. (Moltke's militärische Werke, etc. Gruppe 2. Teil 3.—Moltke's Generalstabreisen aus den Jahren 1858 bis 1869.) By F.-M. Helmuth, Graf v. Moltke. 2 vols. (1 of maps). 8vo. Berlin, 1906.

Motorist's Interpreter, The. A Vocabulary of Terms relating to Motors and Motoring in English, French and German. 12mo. Hirschfeld. 1/- net.

N.

Napoleon's Campaign in Spain, 1808-1809. (Campagne de l'Empereur Napoleon en Espagne, 1808-1809.) By Commandant Balagny. Published under the direction of the Historical Section of the French General Staff. Vol. 4. Maps and plans. 8vo. Paris, 1906.

Natal Directory, including Zululand, Griqualand East, and Pondoland, 1907. 8vo. Durban, 1906.

Nation in Arms, The. By Baron Colmar von der Goltz. Translated by Philip A. Ashworth. New edition, revised in accordance with the 5th German edition. 492 pp. 8vo. London, 1907. Rees, 7/6 net.

Naval Policy. A plea for the study of war. By Barfleur. William Blackwood & Sons. 7/6 net.

Navy, The truth about the; with an account of the development of the German fleet, and details of the world's war fleets, built and building, with statistical comparisons. By Excubitor. 96 pp. 8vo. London, 1906. Chapman & Hall, 1/- net.

P.

Pay, The Soldier's. By Carolus. London, 1907. W. Clowes. 3d.

Peninsula War, The, March 1st, 1811, to the close of the War in 1814. By J. H. Anderson. 116 pp. 8vo. London, 1907. Rees. 3/6 net.

Peninsula, Story of the Campaigns in the. Part III. May, 1813, to the end of the War in April, 1814. By Lieut.-Colonel H. M. E. Brunner. London, 1907. Forster Groom & Co. 3/6.

Port Arthur, Before, on a Destroyer. The Personal Diary of a Japanese Naval Officer. Translated from the Spanish edition by Captain R. Grant. 252 pp. 8vo. J. Murray. 9/- net.

Provision of Officers. Interim Report of the War Office Committee on the, (a) For service with the Regular Army in War, and (b) for the Auxiliary Forces. 28 pp. Folio. London, 1907. Wyman & Sons. 24d.

R.

Reconnaissance of Berguent [Southern Oran]. (Reconnaissance du Groupe mobile de Berguent). From the official reports of Général Lyautey. Reprinted from the "Revue de Cavalerie." 30 pp. 8vo. Maps and plans. Paris, 1906. Berger, Levrault et Cie. 1 fr. 25 c.

Rifle, A Handbook for the War Office Miniature. Birmingham Small Arms Factory. 6d.

Russo-Japanese War, The, on land: a brief account of the strategy and major tactics of the war. By Captain F. R. Sedgewick, R.F.A. 166 pp. Plans, 8 vo. London, 1906.

Russo-Japanese War, Reports of Military Observers attached to the Armies in Manchuria during the. United States Military Information Division. Part I. Maps and plans. 8vo. Washington, 1906.

Russo-Japanese War, The. Compiled by the General Staff, War Office. Part I. 89 pp. Maps. 8vo. London, 1906. To be purchased, either directly or through any bookseller, from Wyman & Sons, Ltd., Fetter Lane, E.C.4; or Oliver & Boyd, Edinburgh; or 7. Ponsonby, 116 Grafton Street, Dublin, 1/6.

Russo-Japanese War, International Law and Diplomacy of the. By A. S. Hershey. 8vo. London, 1907. Macmillan. 12/6 net.

Russo-Japanese War. Criticisms and observations by combatants, Series 1. Plans. 8vo. Vienna, 1906. Seidel. 3/-

Russo-Japanese War. Tactical questions of the day with reference to experiences in the Russo-Japanese War. By Major H. Schmid. 164 pp. 8vo. Vienna, 1907. Seidel. 4/-

Russo-Japanese War. On the fields of Manchuria and in Russia after the war. By S. A. Toluzakov. St. Petersburg, 1906. Berezovskii, 14 Kolokolnaya Uliitsa.

Russo-Japanese War. In the Russian Camp in Manchuria. By Filippo Camperio. (Al Campo Russo in Manciuria). 450 pp. 8vo. 26 plates and 210 photos. Milan, 1907. "Tecnografica." 15 francs.

S.

Sick and Wounded, with the, in Tokio—the philanthropic work of the Japanese Red Cross and population. (Bei den Kranken und Verwundeten in Tokyo, oder die Liebes thätigkeit des jap. Rothen Kreuzes und Volkes. Ein Erinnerungsblatt an den russ-jap. Krieg.) By C. Sturzenegger. 32 pp. Illustrations. 8vo. Yokohama, 1906.

South Africa, The Guide to. By A. Samler and G. Gordon Brown. 14th edition, 1906-07. 477 pp. Maps. 8vo. London, 1906.

South Africa, Lord Milner's Work in, from its commencement in 1897, to the Peace of Vereeniging in 1902; containing hitherto unpublished information. By W. Basil Worsfold. 620 pp. Portraits and Map. 8vo. London, 1906.

South Africa. Official Code Book. An Alphabetical List of Telegraph Offices in the several Colonies, States, and Territories of South Africa, &c., viz., Trans-Continental Company, Basutoland, Beira Railway Company, Cape Colony, Province of Lourenço Marques, Mozambique, N.W. Rhodesia, Orange River Colony, Portuguese East Africa, S. Rhodesia, Tete Administration, Transvaal. 143 pp. Folio. Cape Town, 1906.

Staff Rides. With hints on writing Appreciations and Reconnaissance Reports. By Capt. A. H. Marindin. Third edition. 104 pp. Map. 8vo. London, 1907. Rees. 2/- net.

Statistical Handbook. Austrian, 1905. 4to. Vienna, 1906. Seidel. 5/6.

Strategy, Peace. By Lieut.-Colonel C. à Court Repington, C.M.G. (lecture before the Aldershot Mil. Society). 17 pp. London, 1907. H. Rees. 6d.

T.

Tactics and military history. Studies in. Great General Staff. (Studien zur Kriegsgeschichte und Taktik). Vols. 1 to 5. 8vo. Berlin, 1906. 16/-, 19/-, 20/-, 13/6, 26/-.

Tactics and Combined training. Treatise on. (Leitfaden für den Unterricht in der Taktik.) 147 pp. 8vo. Berlin, 1906. Mittler. 5/3.

Tamil Grammar self-taught. By Don M. de Zilva Wickremasinghe. London, 1906. E. Marlborough & Co.

Tibet, the Mysterious. By Colonel Sir T. H. Holdich. 365 pp. Maps and illustrations. 8vo. London, 1906.

Topographical Section of the General Staff, the, with an account of the Geographical Services of the Austrian, French, German, and Russian Armies. By Captain G. R. Frith, R.E. 64 pp. 12mo. Chatham, 1906.

Transvaal, The Kaleidoscopic. By Carl Jeppe. 266 pp. 8vo. London, 1906. Chapman & Hall. 7/6 net.

Truce in the East and its Aftermath. By B. L. Putnam Weale. London, 1907. Macmillan. 12/6.

V.

Veterinary Toxicology. By J. A. Nunn. 8vo. London. Ballière. 5/- net

W.

War, The Aftermath of. An account of the repatriation of Boers and natives in the Orange River Colony, 1902-1904. By G. B. Beak. 296 pp. Maps and illustrations. 8vo. London, 1906.

Wellington's Campaigns, Peninsula—Waterloo, &c. Part 3—Nivelle to Waterloo. (Campaigns in South of France and Belgium.) By Maj-Gen. C. W. Robinson, C.B. Maps and plans. 8vo. London, 1906. Rees, 3/6 net.

West African Warfare. By C. Braithwaite Wallis. 118 pp. 8vo. London, 1905.

Works, Field, Practical Instruction in, for Infantry (Instruction pratique sur les Travaux de Campagne à l'usage des troupes d'Infanterie). 70 pp. Paris, 1907. H. Lavauzelle.

PART III.

MAGAZINE ARTICLES.

(For abbreviations see page 793).

A.

- A. B. G. B. S.* (All-big-gun-battleship). By Black Joke. U.S.M., March, 1907.
- Aerial Navigation, Recent Progress in.* By Colonel J. D. Fullerton, R.E., J.U.S.I., January, 1907.
- Airship, a French Dirigible.* By C. R., M.T., January 15th, 1907.
- Ambulance Tonga, the Indian.* By Lieutenant-Colonel H. Hathaway. J.R.A.M., March, 1907.
- Arms Traffic in East Africa.* The agreement of December 13th. A.F., December, 1906.
- Army, The British.* By Charles Godefroy. Con. Heft 5. 1907.
- Army, English.* The Reorganisation of. B.P.B.M. 26th January, 1907.
- Army, a National and Imperial.* By Colonel St. J. Fancourt, C.B. "Empire Review," February, 1907.
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The Journal of the Royal Artillery.

ABBREVIATIONS.

Abbreviation.	Name of Newspaper or Periodical.	Place of Publication.
A.M.P.	Archives de Médecine et de Pharmacie Militaire	M. Paris.
A.M.B.	Artilleristisches Monatsheft	M. Berlin.
A.J.	Artilleriskii Jurnal	M. St. Petersburg.
A.F.	Bulletin du Comité de l'Afrique Française	M. Paris.
A.S.C.	Army Service Corps Quarterly	Q. Aldershot.
B. Mag.	Blackwood's Magazine	M. Edinburgh.
B.P.B.M.	Bulletin de la Presse et de la Bibliographie Militaires (Supplement to J.M.O.B.)	F. Brussels.
B.R.O.	Bulletin des Réunions d'Officiers (Revue du Cercle Militaire)	W. Paris.
Con.	Continent, Der	Berlin.
C. Mag.	Canadian Magazine	M. Toronto.
C.J.	Cavalry Journal	Q. London.
C.R.	Contemporary Review	M. London.
D.M.G.	De Militaire Gids	M. Haarlem.
D.M.S.	De Militaire Spectator	M. Haarlem.
D.M.Z.	Deutsche Militärärztliche Zeitschrift	M. Berlin.
F. Rev.	Fortnightly Review	M. London.
G.J.	Geographical Journal	M. London.
G.Z.	Geographische Zeitschrift	M. Leipzig.
I.R.	Internationale Review (Armeen und Flotten)	M. Dresden.
J.D.A.M.	Jahrbücher für die Deutsche Armee und Marine	M. Berlin.
J.M.O.B.	Journal Militaire Officiel, Bruxelles	M. Brussels.
J.A.M.S.	The Military Surgeon	M. Carlisle, Penn.
J.M.S.I.	Journal of the Military Service Institution	2M. Governor's Island, N. York.
J.R.A.M.	Journal of the Royal Army Medical Corps	M. London.
J.S.M.	Journal des Sciences Militaires	M. Paris.
J.U.S.I.	Journal of the Royal United Service Institution	M. London.
K.T.Z.	Kriegstechnische Zeitschrift	M. Berlin.
K.M.	Kavalleristische Monatshefte	M. Vienna.
L.B.M.	La Belgique Militaire	W. Brussels.
L.R.I.	La Revue d'Infanterie	M. Paris.
L.S.M.	Le Spectateur Militaire	F. Paris.
M.A.G.	Mittheilungen über Gegenstände des Art.-u. Genie-Wesens	M. Vienna.
M.T.	Militært Tidsskrift	F. Copenhagen.
M.W.B.	Militär-Wochenblatt	W. Berlin.
N.C.	Nineteenth Century	M. London.
N.R.	National Review	M. London.
O.M.Z.	Österreichische Militärische Zeitschrift	M. Vienna.
P.R.A.I.	Journal of the Royal Artillery	M. Woolwich.
P.U.S.I.	Journal of the United Service Institution of India	Q. Simla.
Q.D.	Questions Diplomatiques et Coloniales	F. Paris.
R.A.G.	Rivista di Artiglieria e Genio	M. Rome.
R.C.	Revue de Cavalerie	M. Paris.
R. d'A.	Revue d'Artillerie	M. Paris.
	Revue du Cercle Militaire. See B.R.O.	M. Paris.
R. du G.	Revue du Génie Militaire	M. Paris.
R.E.J.	Royal Engineers' Journal	M. Chatham.
R.H.	Revue d'Histoire	M. Paris.
R.M.B.	Revue de l'Armée Belge	2M. Liege.
R.M.G.	Revue Militaire générale	M. Paris.
R.M.E.	Revue Militaire des Armées étrangères	M. Paris.

W., published weekly; F., fortnightly; M., monthly; Q., quarterly.

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THE GILBERT-WOOD PRESS,

3 & 5, ARNOLD STREET, STRAND, LONDON, W.C.

Telephone Nos. 2511 & 2512 (Exchange).

Telegraphic Address: "Gilbertwood, London."

ABBREVIATIONS.—contd.

Abbreviation.	Name of Newspaper or Periodical.		Place of Publication.
R.M.I. ...	Rivista Militare Italiana	M.	Rome.
R.M.L. ...	Rivista Militar	F.	Lisbon.
R.M.S. ...	Revue Militaire Suisse	M.	Lucerne.
S.Z.A.G. ...	Schweizerische Zeitschrift für Artillerie und Genie	M.	Frauenfeld.
U.S.A. ...	United States Artillery Journal	2M.	Fort Monroe.
U.S.C. ...	United States Cavalry Association Journal	Q.	Fort Leavenworth.
U.S.I. ...	United States Infantry Association Journal	Q.	Washington.
U.S.M. ...	United Service Magazine (Colburn's)	M.	London.
V.S. ...	Voenii Sbornik	M.	St. Petersburg.
V.T.H. ...	Vierteljahrshefte für Truppenführung und Heereskunde	Q.	Berlin.

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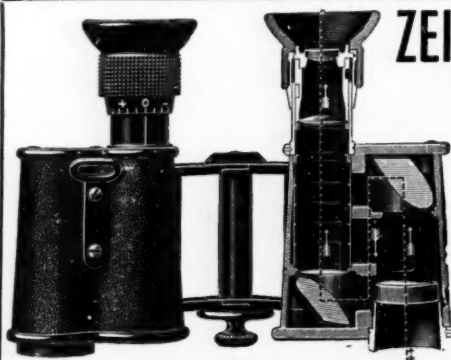
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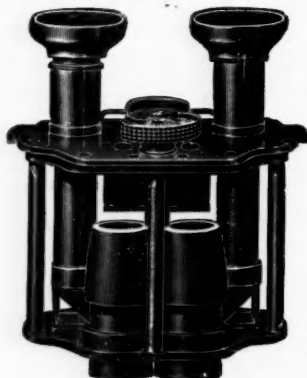
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